CHAPTER 2
FILLING OUT THE APPLICATION

(For EZ Projects Go Directly to Chapter 6)

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CHAPTER 2: FILLING OUT THE APPLICATION

Filling Out The Application Form

The first step in preparing a complete Michigan Department of Environmental Quality (MDEQ)/ United States Army Corps of Engineers (USACE) Joint Permit Application (JPA) is to carefully read the entire JPA package before filling in the required information. If a copy of the application was received by mail, make some extra photocopies of the forms. If the application was downloaded and printed from the internet, print out additional copies. The extra copies can be used in case mistakes are made filling in the forms or they can be used for future applications. If the fill-in form is being used on a personal computer, photocopies do not need to be made because any mistakes can be corrected on the computer at the same time the forms are being filled out.

The application contains 21 sections, with multiple fields for each section. Sections 1 through 9 must be completely filled out by all applicants. For Sections 10 through 20, only the sections that pertain to a proposed project must be filled out. Always check Section 21 for applicability on whether the project is in a designated Environmental Area. See Chapter 3 for a discussion of Environmental Areas. **Appendix N contains "EZ Guides" to help prepare common minor project applications.**

Carefully read and follow all directions or advice provided in the bulleted areas under each section.

The majority of applications that require a correction request letter from MDEQ staff lack information that was clearly requested in the permit application. Before submitting an application, double check to make sure that all items are properly filled out and all information has been provided that is necessary to make a complete application. Number and put the applicant's name on each page of the application and attachments submitted. The following items are some of the more common mistakes or missing items that should have been provided on or with the application.

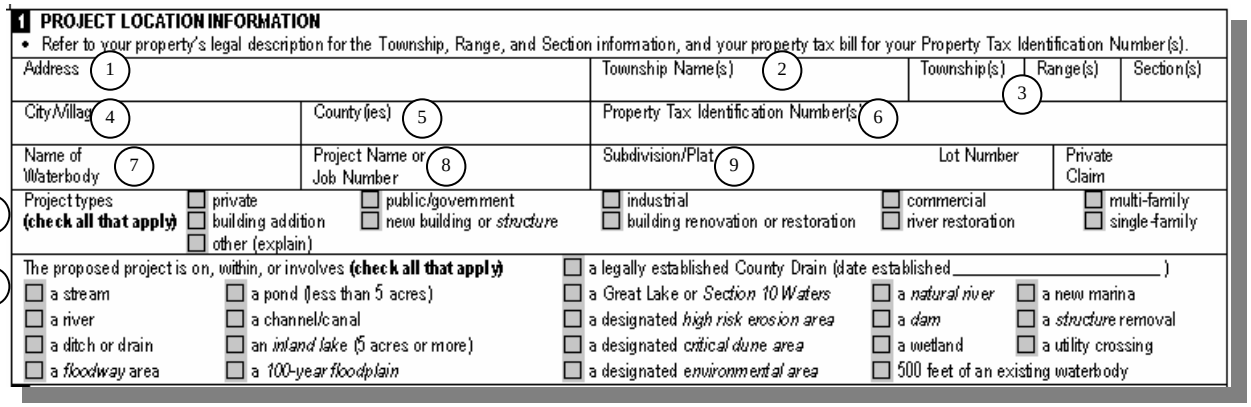
- Filing fee (See Chapter 4)
- Township, Range, and Section Numbers
- Property Tax Identification number
- Detailed project purpose and alternatives listed under Section 4.
- Letters of authorization
- All adjacent property owners listed
- A signed and dated application with a box checked to identify who signed the application
- Scaled overall site plan and parts of the plans

This Chapter goes through the application form section by section, and provides detailed information about each field. Information provided in this chapter is based on the September 2002 version of the application.

Sections 1 through 9 must be completed in full. All portions of Sections 1 through 9 must be completed. Complete only the relevant portions of Sections 10 through 21 of the application.

SECTION 1: Project Location Information

Section 1 is used by the MDEQ to create a record for tracking purposes in the Coastal and Inland Waters Permit Information System (CIWPIS) database and to categorize the project. This information also helps identify the project location on various maps and databases, to aid in determining if the site is within an area of special environmental concern. Several types of maps, databases, etc. are used by the MDEQ on a regular basis to encode information correctly and to perform a thorough and accurate review of the application. This information also enables field staff to more easily locate the site for inspections. Additional information regarding the CIWPIS data base is available in Chapter 5.



1 PROJECT LOCATION INFORMATION

- Refer to your property's legal description for the Township, Range, and Section information, and your property tax bill for your Property Tax Identification Number(s).

Address (1)		Township Name(s) (2)	Township(s) (3)	Range(s)	Section(s)
City/Village (4)	County(ies) (5)	Property Tax Identification Number(s) (6)			
Name of Waterbody (7)	Project Name or Job Number (8)	Subdivision/Plat (9)	Lot Number	Private Claim	

(10) Project types **(check all that apply)**: ☐ private ☐ public/government ☐ industrial ☐ commercial ☐ multi-family ☐ building addition ☐ new building or *structure* ☐ building renovation or restoration ☐ river restoration ☐ single-family ☐ other (explain)

(11) The proposed project is on, within, or involves **(check all that apply)**:

☐ a stream ☐ a pond (less than 5 acres) ☐ a legally established County Drain (date established _____) ☐ a Great Lake or *Section 10 Waters* ☐ a *natural river* ☐ a new marina
☐ a river ☐ a channel/canal ☐ a designated *high risk erosion area* ☐ a *dam* ☐ a *structure* removal
☐ a ditch or drain ☐ an *inland lake* (5 acres or more) ☐ a designated *critical dune area* ☐ a wetland ☐ a utility crossing
☐ a *floodway* area ☐ a *100-year floodplain* ☐ a designated *environmental area* ☐ 500 feet of an existing waterbody

1. **Address:** Provide the complete mailing address for the project site. If a mailing address is not available, then a street name and nearest intersection should be provided.

EXAMPLE: 3333 West River Street, Lansing, MI 48909 (or)
West River St., near the intersection of River Street and Creek Street

2. **Township Name(s):** Provide the name of the Township where the project is located. This can sometimes be found in a legal description of the property, a plat book, or from tax records.

3. **Township(s), Range(s), Section(s):** Provide the Township, Range and Section numbers for where the project site is located. The Township, Range and Section numbers are typically located on the property's legal description. They can also be obtained from the local government office (city, village, township), or from plat books. List all town, range, and section numbers that are applicable to the project. If multiple counties and/or townships are involved, provide a separate narrative that lists all the townships, ranges

and section numbers involved within each county and/or township. The Township is provided as a number North or South, the Range is provided as a number East or West, and the Section number is typically a number ranging from 1 through 36.

Example of Township, Range, Section:

- T12N, R10W, Sec. 23 or
- T03S, R03E, Sec.32

4. **City/Village:** Provide the name of the city or other municipality in which the proposed project site is located. If the project is in an unincorporated area, list the location used for mailing purposes.

5. **County(ies):** Provide the county or counties in which the proposed project site is located.

- ✓ ***If the project is in multiple locations, list each location separately.***

6. **Property Tax Identification Number(s):** Provide the property tax identification numbers for the project site. These should be located on a property tax bill. If the property tax identification number is not known, it may be obtained from the municipality that assesses property taxes. The MDEQ utilizes this information to determine if the project site is within a designated high risk erosion area, critical dune area, or environmental area.

7. **Name of Waterbody:** Provide the name of the waterbody if any portion of a project will take place below the Ordinary High Water Mark (OHWM) of a waterbody, within 500 feet of a waterbody, or within the 100-year floodplain of a waterbody. A waterbody can be a drain, stream, lake, pond, canal, etc. If the name of the waterbody is not known, label the waterbody as "unnamed" (such as "unnamed stream" or "unnamed lake"). If the project involves a wetland but not a waterbody, enter "wetland" in this box. Additionally, if the wetland is within 500 feet of a waterbody, provide the name of the waterbody.

Example for Project within 500 Feet or Within 100-Year Floodplain of Waterbody: "within 500 feet of Mill Creek" or "within 100-year floodplain of Pine River"

8. Project Name or Job Number: A project name or job number should be provided when applicable. This can be the name of a subdivision, condominium development, or a job number for tracking purposes. This is helpful when correspondence is required. If a name or job number is listed, it can be used as a quick reference. If a project name or job number is provided on the application, it will be entered in the "Project Name" portion of any Permit Consolidation Unit (PCU) correspondence so that an applicant and/or agent will know what project is being referred to in the correspondence.

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
Geological and Land Management Division

APPLICATION CORRECTION REQUEST

Required by Part 301, Inland Lakes and Streams; Part 303, Wetland Protection; Part 31, Water Resources Protection; or Part 325, Great Lakes Submerged Lands of Act 451, P.A. 1994, as amended.

Failure to supply the required information will result in the withdrawal of your application.

This acknowledges receipt of your application recently submitted to this office. The application is incomplete as received, lacking the items indicated below. Please submit the items indicated below. If you have any questions, contact the Geological and Land Management Division at **(517) 373-9244.**

applicant
street address
city, state zip

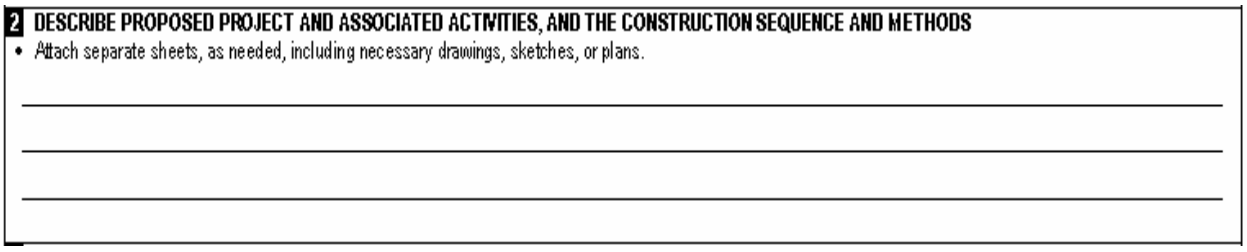
Date:
File No.:
County:
Project Name:

9. Subdivision/Plat: If the project includes the construction of, or work within, a Subdivision or Plat or Condominium development, the name of that development should be provided. See Chapter 3 for further discussion of subdivisions.

10. Project types: All of the boxes that apply to the project should be checked.

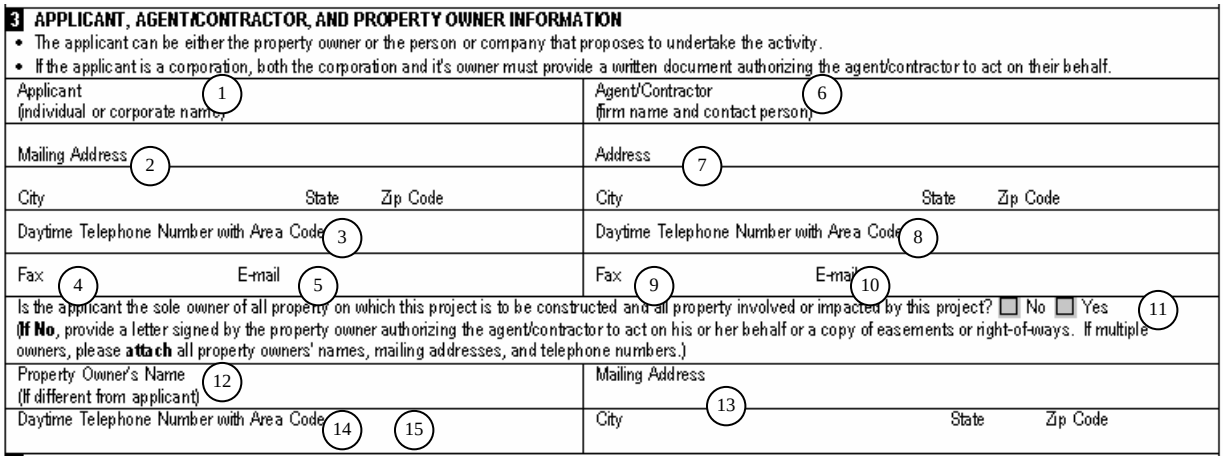
11. The proposed project is on, within, or involves: A check mark should be placed next to all of the areas that apply to the project.

SECTION 2: Describe Proposed Project and Associated Activities, and the Construction Sequence and Methods


2 DESCRIBE PROPOSED PROJECT AND ASSOCIATED ACTIVITIES, AND THE CONSTRUCTION SEQUENCE AND METHODS
• Attach separate sheets, as needed, including necessary drawings, sketches, or plans.

This description should include all proposed activities, their construction sequences, and the methods to be used for these proposed impacts (mechanical, hydraulic, etc.). If unknown or if in the planning stages, include the current proposed situation, indicating that it is subject to MDEQ review. The description should also include detailed volume amounts and surface area impacts for each proposed activity. To save review time, this description should be set up in the same format as the MDEQ Public Notice. See example of Project Narrative in Chapter 4. This information can be provided on a separate page and attached to the application.

SECTION 3: Applicant, Agent/Contractor, and Property Owner Information



3 APPLICANT, AGENT/CONTRACTOR, AND PROPERTY OWNER INFORMATION

- The applicant can be either the property owner or the person or company that proposes to undertake the activity.
- If the applicant is a corporation, both the corporation and it's owner must provide a written document authorizing the agent/contractor to act on their behalf.

Applicant (1) (individual or corporate name)	Agent/Contractor (6) (firm name and contact person)
Mailing Address (2)	Address (7)
City State Zip Code	City State Zip Code
Daytime Telephone Number with Area Code (3)	Daytime Telephone Number with Area Code (8)
Fax (4) E-mail (5)	Fax (9) E-mail (10)

Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? ☐ No ☐ Yes (11)
(**If No**, provide a letter signed by the property owner authorizing the agent/contractor to act on his or her behalf or a copy of easements or right-of-ways. If multiple owners, please **attach** all property owners' names, mailing addresses, and telephone numbers.)

Property Owner's Name (12) (If different from applicant)	Mailing Address (13)
Daytime Telephone Number with Area Code (14) (15)	City State Zip Code

1. Applicant: Provide the name of the individual, agency, corporation, etc. applying for the permit. If the applicant is not the sole owner of all impacted properties, a letter signed by the property owner(s) authorizing the agent/contractor to act on his/her behalf or a letter from the affected landowner(s) authorizing the permit applicant to apply for the permit and perform the proposed construction activities on his/her property is required. A copy of easements or right-of-ways can substitute for letters of authorization in limited instances.

> The applicant is generally the property owner or the person or company that proposes to undertake the activity, not the contractor or agent.

2. Mailing address: Provide the complete mailing address for the applicant.

3. Daytime Telephone Number with Area Code: Provide the Monday through Friday daytime (between 8:00 am and 5:00 pm) telephone or cell number of the applicant. When only a small amount of information is needed, a daytime phone number of the applicant often helps eliminate the need to mail out letters and shortens the review time.

4. Fax: Provide the applicant's fax number in case documents need to be faxed to the applicant.

5. E-mail: Provide the applicant's e-mail address. The recent use of e-mail to send letters and notes has greatly reduced the response time to MDEQ requests. If a correction request letter is required for the project, PCU staff will e-mail the request and send a hard copy. Sending a correction request by e-mail can easily save 3-5 days in processing time.

> Due to the quantity of applications received, while e-mail reduces processing time, it does not guarantee immediate attention.

6. **Agent/Contractor:** Provide the name of the individual, contractor, company, etc. serving as the applicant's agent. When listing a company name as the agent, provide the name of the contact person that will be handling the application.

7. **Address:** Provide the complete mailing address for the agent/contractor. The agent's or contractor's complete mailing address should be provided. The address is important when correction requests, public notices, permits, and other correspondence are sent out.

8. **Daytime Telephone Number with Area Code:** Provide the Monday through Friday daytime (between 8:00 am and 5:00 pm) telephone or cell number for the agent. When only a small amount of information is needed a daytime phone number of the agent often helps eliminate the need to mail out letters, and shortens the review time.

9. **Fax:** Provide the agent's fax number in case documents need to be faxed to the agent.

10. **E-mail:** Provide the agent's e-mail address. The recent use of e-mail to send letters and notes has greatly reduced the response time to MDEQ requests. If a correction request letter is required for the project, PCU staff will e-mail the request and send a hard copy. Sending a correction request by e-mail can save 3 to 5 days in processing time.

11. **Is the applicant the sole owner of all property:** Check the box "No" or "Yes" to specify if the applicant is the sole owner of all property on which the project is to be constructed and all property involved or impacted by the project. If "No" is checked, a letter signed by the owner(s) authorizing the agent/contractor to act on his/her behalf or a copy of easements or right-of-ways is required. If multiple owners (such as joint ownership by siblings, or associations) are applying for a permit, provide mailing addresses and phone numbers for each, along with letters of authorization. Disclose any DEQ conservation easements or other easements, deed restrictions, leases or any other encumbrance upon the property in the project area. A copy of the land restriction must be provided.

12. **Property Owner's Name (if different from applicant):** Provide the name(s) of the property owner(s) if the applicant is not the owner or sole owner of the property on which the project will take place or that will be impacted.

If dredging a channel, approval is required from all adjacent property owners located along the affected channel.

13. **Mailing Address:** Provide the complete mailing address for the property owner(s).

14. **Daytime Telephone Number With Area Code:** Provide the owner(s) daytime phone or cell number(s) so that the property owner(s) can be reached for additional information.

15. ***E*-mail***: Although an e-mail address for the property owner(s) is not requested on the application, this information should be provided so that the landowner(s) can receive a copy of any e-mail that is sent to the applicant or agent.*

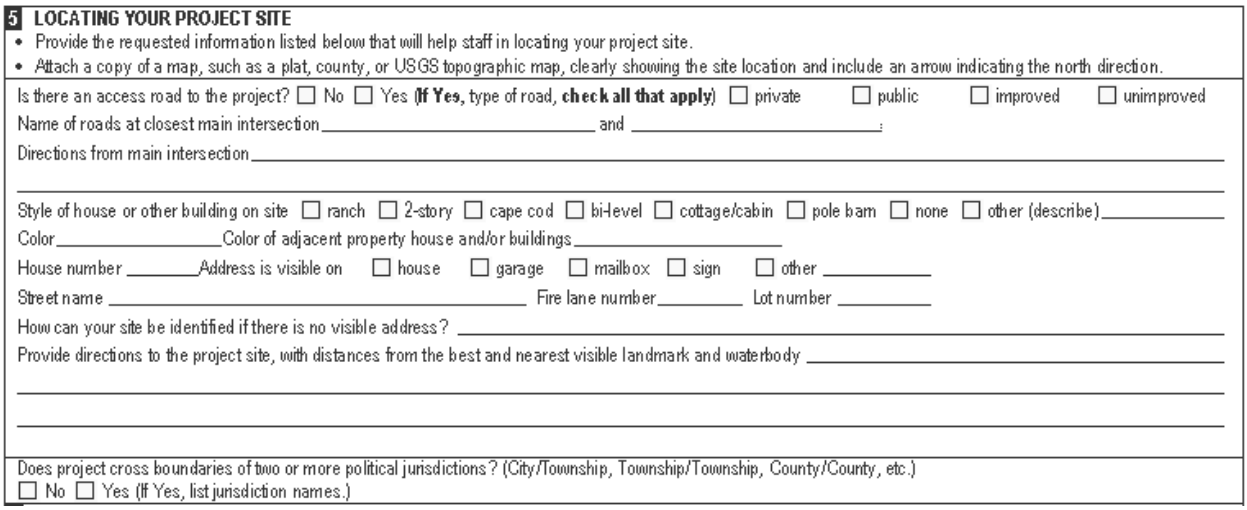
SECTION 4: Proposed Project Purpose, Intended Use, and Alternatives Considered

4 PROPOSED PROJECT PURPOSE, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

- The purpose must include any new development or expansion of an existing land use.
- Include a description of alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative construction technologies; alternative project layout and design; alternative locations; local land use regulations and infrastructure; and pertinent environmental and resource issues.
- For utility crossings, include both alternative routes and alternative construction methods.

This section requires a detailed description of the purpose of the project and its intended use, which includes any new development or expansion of an existing land use. This also includes all alternatives that were considered to minimize or eliminate impacts to the natural resources. Alternatives must be discussed and may be provided as an alternative analysis document. This may include factors such as, but not limited to, alternative construction technologies, alternative project layout and design, alternative locations, local land use regulation and infrastructure, and pertinent environmental resource issues. See Appendix M for an example of an alternatives analysis.

SECTION 5: Locating Your Project Site



5 LOCATING YOUR PROJECT SITE

- Provide the requested information listed below that will help staff in locating your project site.
- Attach a copy of a map, such as a plat, county, or USGS topographic map, clearly showing the site location and include an arrow indicating the north direction.

Is there an access road to the project? ☐ No ☐ Yes (**If Yes**, type of road, **check all that apply**) ☐ private ☐ public ☐ improved ☐ unimproved

Name of roads at closest main intersection _____ and _____;

Directions from main intersection _____

_____

Style of house or other building on site ☐ ranch ☐ 2-story ☐ cape cod ☐ bi-level ☐ cottage/cabin ☐ pole barn ☐ none ☐ other (describe) _____

Color _____ Color of adjacent property house and/or buildings _____

House number _____ Address is visible on ☐ house ☐ garage ☐ mailbox ☐ sign ☐ other _____

Street name _____ Fire lane number _____ Lot number _____

How can your site be identified if there is no visible address? _____

Provide directions to the project site, with distances from the best and nearest visible landmark and waterbody _____

_____

_____

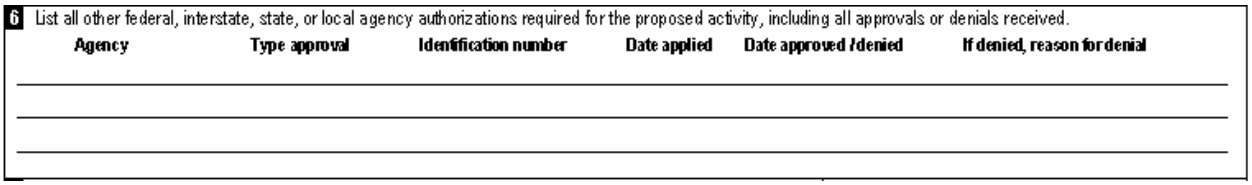
Does project cross boundaries of two or more political jurisdictions? (City/Township, Township/Township, County/County, etc.)
☐ No ☐ Yes (If Yes, list jurisdiction names.)

This section asks for a detailed description of the property so that the project can be located by MDEQ field representatives when they visit the site for their inspection. It should not be assumed that the field representative inspecting the site knows where the site is, how to get to the site, or where certain landmarks are. Include any identifying features in the area and major road intersections. Include a north arrow on the vicinity map and make sure this is consistent with other drawings submitted. PCU staff also use this to help locate the project on other maps such as National Wetland Inventory Maps (NWI) and Federal Emergency Management Agency (FEMA) maps. See chapter 4 for information on how to obtain NWI and FEMA maps. Provide labeled and dated descriptive photographs of the work site showing vegetation, shorelines and/or relief. The work area must be staked for the site visit, therefore showing the staked areas in the photographs is beneficial.

Don't forget to include a detailed vicinity map

If using MapQuest® or other computer assisted mapping system, please make sure the map is complete and accurate, provides information on nearby cross streets, and is reproducible when photocopied. The specific location of the site must be shown on the map by specifically labeling the "SITE", placing an "X," or drawing the site property boundaries on the map.

SECTION 6: List of Authorizations Required for the Proposed Activities

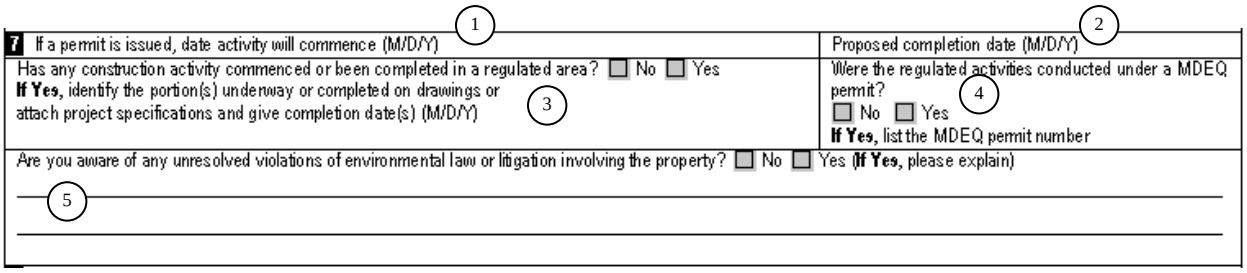

6 List all other federal, interstate, state, or local agency authorizations required for the proposed activity, including all approvals or denials received.

Agency	Type approval	Identification number	Date applied	Date approved /denied	If denied, reason for denial

This section requires a list of permits or approvals other than the land/water permit, required or obtained for the proposed project. Provide the name of the agency, type of approval, identification number, date the authorization was applied for, the date the authorization was approved or denied (if a decision has been made) and as applicable, the reasons for the denial. If the applications have not been obtained, indicate their current status. These authorizations are for other permits, approvals, variances, and conveyances that may be required by the MDEQ and other federal, interstate, state, or local agencies for the construction of the project. This section helps the MDEQ coordinate with other agencies and can help speed up the time frame for possible permit issuance.

EXAMPLES: soil erosion and sedimentation control permits, health department septic system permits, USACE permits.

SECTION 7: Project Background/History Information



This section is designed to provide the department with all the necessary information to identify the proposed time period for the project; when construction is proposed to begin, when it is proposed to be completed, and if any part of the project has already been started. This information allows field staff to evaluate potential seasonal environmental impacts of the proposed activity. Any part of the project that has been started without benefit of a MDEQ permit is referred to as "after-the-fact".

1. **If permit is issued, date activity will commence:** Provide the month, day, and year proposed to start construction of the project, pending issuance of a permit.

2. **Proposed completion date:** Provide the month, day, and year when the project is proposed to be completed, pending issuance of a permit.

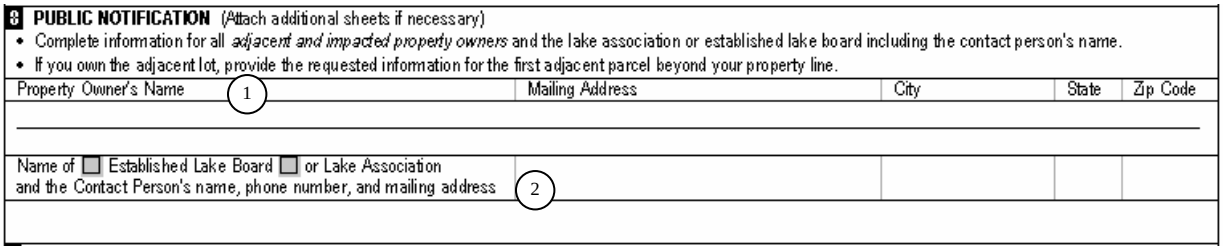
3. **Has any construction commenced or been completed in a regulated area:** Check the box "No" or "Yes." If a Notice of Violation has been received from one of the district offices, provide the violation number (i.e. 03-00-1234-V). If the project has commenced or has been completed within a regulated area, clearly identify and label the portion(s) underway or completed on drawings attached to the application, attach project specifications, and dates the activity was completed. Also provide a detailed narrative describing what has been completed without benefit of a permit and what is still proposed. Refer to Chapter 1 for an overview of regulated areas.

> All after-the-fact permit applications should be initiated through the MDEQ field representative and after-the-fact activities should be discussed with the MDEQ district field staff before submitting the application. Do **not** send an after-the-fact permit application and/or information to the MDEQ PCU unless a written request signed by a PCU staff person is received. Any response to additional information requests should be sent to the staff person that signed the correspondence requesting the information.

4. **Were the regulated activities conducted under a MDEQ permit:** Check the box “No” or “Yes”. If a permit was issued for the completed portion of the project, include the MDEQ file number and a copy of the issued permit (including plans) with the new application. If there is no file number, provide an approximate date the project was undertaken.

5. **Are you aware of any unresolved violations of environmental law or litigation involving the property:** Check the box either “No” or “Yes”. If “Yes” is checked, explain the unresolved violation.

SECTION 8: Public Notification



8 PUBLIC NOTIFICATION (Attach additional sheets if necessary)

- Complete information for all *adjacent and impacted property owners* and the lake association or established lake board including the contact person's name.
- If you own the adjacent lot, provide the requested information for the first adjacent parcel beyond your property line.

Property Owner's Name (1)	Mailing Address	City	State	Zip Code
Name of ☐ Established Lake Board ☐ or Lake Association and the Contact Person's name, phone number, and mailing address (2)				

Section 8 provides the MDEQ with contact information for all adjacent property owners and/or other property owners that may be impacted by the proposed project. Do **not** list the property owner of the project site as an adjacent landowner. If the applicant also owns the property adjacent to the proposed project site, provide information for the next adjacent property that is not owned by the applicant. Section 8 must be filled out completely, even if it is believed that adjacent landowners will not be impacted. It is recommended that the adjacent property owner's names and mailing addresses be provided even if the project meets the Minor Project or General Permit criteria. See Appendix C for more information on Minor and General permits.

If a project is proposed to impact all of the property owners along a lake (such as a change in lake levels) the names and mailing addresses must be provided for **all** of the lakeshore property owners unless there is a lake board or lake association. If a lake board or lake association has been legally established for the lake where impacts are proposed, the name and mailing address for the lake board should be provided. The lake board may be able to provide the MDEQ with the list of property owners along the entire lakeshore. See letter in Appendix L regarding adjacent property owners.

For projects within large properties, include owners upstream and downstream of the project within viewing distance. If the proposed project is in a wetland, provide all the adjoining property owners, including the owners across the roadway that border the property.

1. **Property owner's name, Mailing address, City, State, Zip Code:** Provide the name(s) and complete mailing address(es) for all of the property owners adjacent to the project site for MDEQ public noticing purposes. This includes adjacent landowners across a street, across a river, across a wetland area, catty-corner, upstream and downstream, and others. This information can be obtained from the municipality that assesses property taxes. So not assume that the street address is the mailing address. Incorrect addresses result in added expense and delay in permit processing.

2. **Name of Established Lake Board or Association:** If the project is located on a lake with an established lake board or association, provide the name and mailing address for the lake board or lake association. Also provide a contact persons name and mailing address for the lake board or association. A condominium Association may also be listed here. A list of all members of the boards or associations may be requested to obtain authorization or for public noticing purposes.

SECTION 9: Applicant's Certification

9 APPLICANT'S CERTIFICATION **READ CAREFULLY BEFORE SIGNING**

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application, that it is true and accurate, and, to the best of my knowledge, is in compliance with the State *Coastal Zone Management Program* and the *National Flood Insurance Program*. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the MDEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site and the completed project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does **not** release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does **not** guarantee the issuance of a permit.

- All applicants must complete all the items in Sections 1 through 9 on pages 1 and 2 of this application.
- Complete those items in Sections 10 through 21 that apply to your project. Submit only those pages where you have provided information.
- **Please list here the application page numbers being submitted and a brief description of other attachments included with your application.**
- Your permit decision will be delayed if forms are incomplete or maps and/or drawings are not submitted.

☐ Property Owner ☐ Agent/Contractor ☐ Corporation - Title_____	Printed Name	Signature	Date

1. List all application page numbers and other attachments being submitted. Attachments may include project narrative, alternatives analysis, vicinity map, letters of authorization, list of adjacent riparians, and drawings.

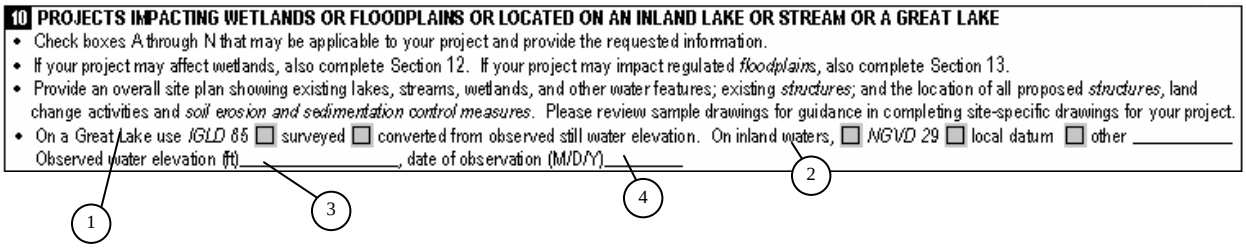
2. The application must contain the printed name, date, and a legible signature by the property owner, agent/contractor, or corporation member. The appropriate box identifying the signatory must be checked. If the owner of the property is not the signatory (the agent/contractor or different applicant signed it), a letter is required from the property owner authorizing the applicant or agent to sign the application on his/her behalf.

For all proposed activities diagrams must be attached. Include drawings consisting of an overall site plan showing existing natural resources and existing and proposed structures and activities and a diagram showing cross sections. The diagrams should be to scale showing the maximum and average dimensions. Sample drawings are provided (in **Appendix B** of this training manual) for all activities, including ones where the application's appendix does not include them.

SECTION 10: Projects Impacting Wetlands or Floodplains or an Inland Lake or Stream or a Great Lake

Section 10 covers all projects proposed in wetlands, floodplains, inland lakes or streams, and the Great Lakes. In several areas the impacts provided here should also be provided in other sections of the application, such as Section 12 for wetlands and Section 13 for floodplains. Note that some projects on the Great Lakes also require an application for Conveyance.

The introduction to Section 10 is designed to obtain elevation information for the proposed project site. The date the water elevation was observed (measured) allows field staff to evaluate potential seasonal environmental impacts of the proposed activity.


10 PROJECTS IMPACTING WETLANDS OR FLOODPLAINS OR LOCATED ON AN INLAND LAKE OR STREAM OR A GREAT LAKE

- Check boxes A through N that may be applicable to your project and provide the requested information.
- If your project may affect wetlands, also complete Section 12. If your project may impact regulated *floodplains*, also complete Section 13.
- Provide an overall site plan showing existing lakes, streams, wetlands, and other water features; existing *structures*; and the location of all proposed *structures*, land change activities and *soil erosion and sedimentation control measures*. Please review sample drawings for guidance in completing site-specific drawings for your project.
- On a Great Lake use *IGLD 85* ☐ surveyed ☐ converted from observed still water elevation. On inland waters, ☐ *NGVD 29* ☐ local datum ☐ other _____ Observed water elevation (ft)_____, date of observation (M/D/Y)_____

1 2 3 4

1. **On a Great Lake use IGLD 85:** International Great Lakes Datum (IGLD) is used to represent water levels in the Great Lakes region. It was jointly established in 1955 by Canada and the United States, and readjusted in 1985. The IGLD 85 elevation for the Ordinary High Water Mark (OHWM) must be used for the proposed project. Specify if known, where the elevation was surveyed or converted from an observed still water elevation.

Lake	OHWM State	Federal
Lake Michigan	580.5	**581.5**
Lake Superior	602.6	**603.6**
Lake Huron	580.5	**581.5**
Lake St. Clair	575.3	**576.3**
Lake Erie	572.2	**573.2**

2. **On Inland waters:** National Geodetic Vertical Datum (NGVD) is a vertical geodetic datum, found by averaging the sea level over a period of many years along the coasts of the US and Canada. NGVD is the distance above mean sea level. If an elevation is used for the proposed project that is located on or near inland waters, specify if that elevation is an NGVD (National Geodetic Vertical Datum), local datum, or another type. Surveyors generally have a database of local bench marks (measurements above mean sea level).

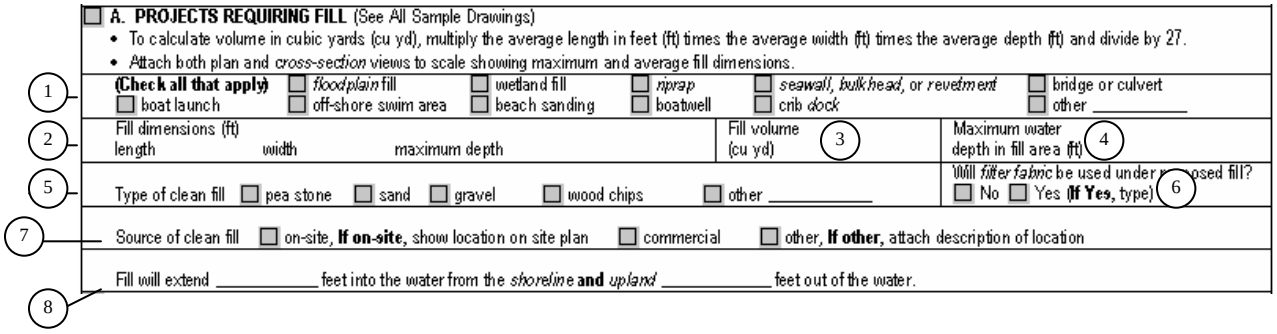
3. **Observed water elevation:** Specify the observed water elevation in feet according to the elevation type being used for the proposed project.

4. **Date of observation:** Specify the month, day, and year the observed water elevation was taken.

Sections (10A-10N) are designed to obtain necessary site specific information for a wide variety of projects that impact wetlands, floodplains, inland lakes, streams, or Great Lakes. Section 10 may seem overwhelming, but only a few of the specified activities or structures may pertain to the project. If any of the Sections 10A through 10N blocks do not apply to the proposed project, either leave the fields blank or put “N/A” (Not Applicable) in those fields.

SECTION 10A: Projects Requiring Fill

Fill refers to any material added to a regulated area, including replacement of existing soils. Fill includes riprap, soils, gravel, top soil, mulch, wood posts, etc. that may be used for backfill, grading, driveway, etc.



If the project requires fill for multiple categories, such as floodplains, wetlands, and riprap, do **not** combine the dimensions and volumes together. Separate the dimensions and volumes for the floodplains, wetlands, and riprap. All dimensions must be provided in feet and all volumes must be provided in cubic yards. This information can be provided in a table and attached to the application. Following are two sample tables.

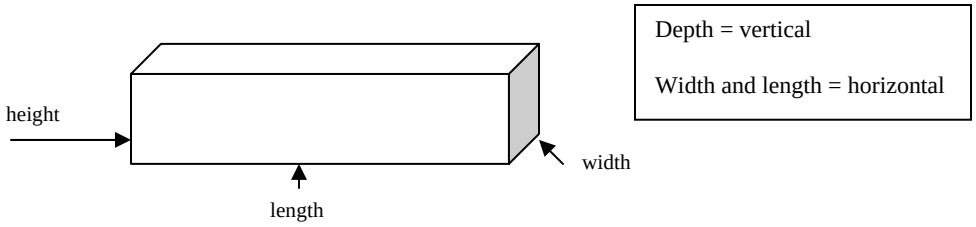
Wetland area	Length (feet)	Width (feet)	Depth (feet)	Volume (cubic yards)
A	150	20	0.5	56
B	120	15	0.7	47
C	80	40	0.5	59

Area	Length (feet)	Width (feet)	Depth (feet)	Volume (cubic yards)
Below OHWM	200	2	1	15
In floodplain	200	3	0.5	11

1. **Check all that apply:** Check each box that describes or pertains to the project. If none of the descriptions apply, check the "other" box and provide a brief description of the proposed activity.

2. **Fill dimension:** Provide the maximum length, width and depth in feet of each proposed fill area. Label the fill as wetland fill, floodplain fill, riprap fill, etc.

3. Fill volume: Provide the volume in cubic yards of material to be placed at each fill area. This volume must be provided in cubic yards, which is the length (feet), times the width (feet), times the depth (feet), all divided by 27.



Formula for Determining Fill Volume:

(Length x Width x Depth) ÷ 27 = volume in cubic yards.

4. Maximum water depth in fill area: If fill is proposed to be placed below the OHWM of a water body or in a wetland that is inundated by water, specify the maximum water depth in feet that is within the proposed fill area.

5. Type of clean fill: Specify the type of fill to be used. Typical examples are provided, so check one or more of the boxes for what is proposed. If the material to be used is not listed, check the "other" box and specify the type of material that will be used instead of or in addition to the other fills.

6. Will filter fabric be used under proposed fill: Check the box "No" or "Yes." If "Yes" is checked, specify the type of filter fabric to be used.

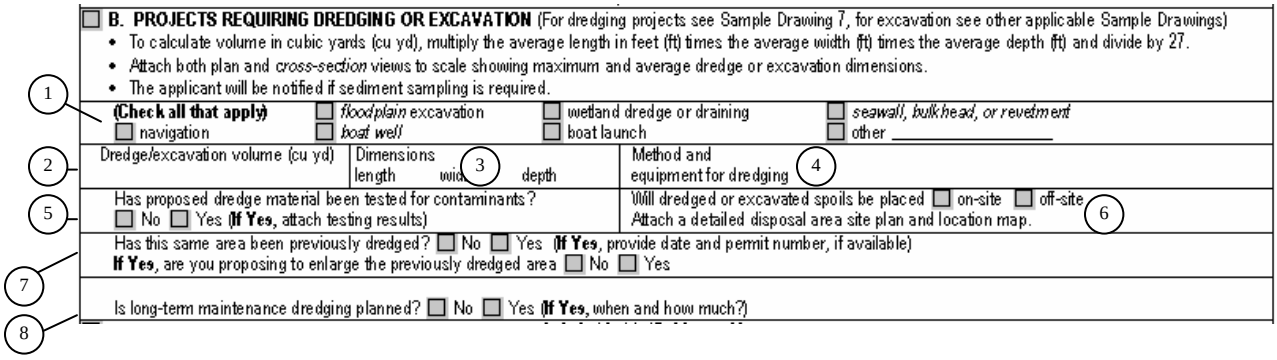
7. Source of fill: If the source of the fill is from on-site, complete Section 10B for the excavation or dredging. Indicate the location of the dredge or /excavation area on the site plan.

8. Fill will extend ___ feet into/out of the water: If fill is proposed along the banks of a waterbody, specify the length that the fill will extend into the water from the shoreline and the length it will extend upland out of the water.

The total amount of fill in the water plus fill upland of the water must match the dimensions provided in item 2 above.

Section 10B: Projects Requiring Dredging or Excavation

Dredging refers to the removal of materials from under water. Excavation refers to the removal of material above the water line. Excavated material may or may not be dry. If the project requires dredging and/or excavation for multiple areas or categories, such as floodplain and wetlands, **do not** combine the dimensions and volumes together. Provide separate dimensions and volumes for the floodplains and for the wetlands. This information can be provided in a table and attached to the application. See the examples in Section 10A.

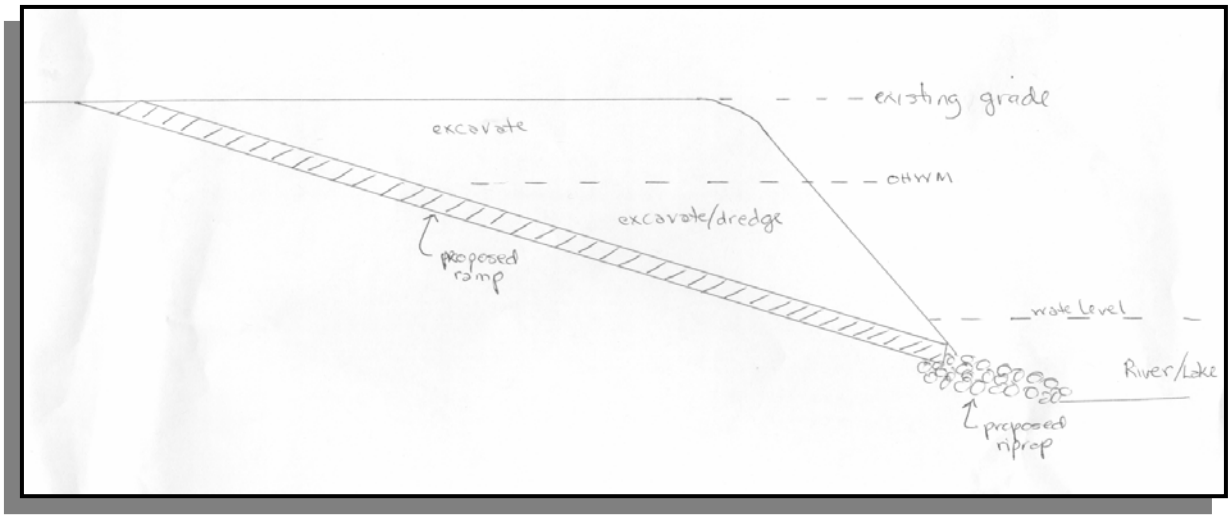


1. **Check all that apply:** Typical dredge projects are listed. Check each box that describes or pertains to the proposed project. If none of the descriptions apply, check the "other" box. If the "other" box is checked, provide a brief description of the proposed activity. This can be provided as a separate attachment to the application.

2. **Dredge/excavation volume:** Provide the volume of material to be dredged/ excavated. This volume must be provided in cubic yards, which is the length (feet) times the width (feet) times the depth (feet), all divided by 27. When providing dredge volumes, provide the volume of material to be removed below the OHWM of the waterbody. If the project also requires excavation above the OHWM, indicate this on the drawings and provide the dimensions and volumes separately. This information allows the PCU staff to accurately determine the regulations that apply and the appropriate application fee.

Formula to Calculate Dredge/Excavation Volumes:
(Length x Width x Depth)÷27=volume in cubic yards.

3. **Dimensions:** Provide the maximum length, the maximum width, and the maximum depth (in feet) for each of the proposed dredge/excavation areas. Show this same information on the project drawings attached to the application submittal.



4. Method and equipment for dredging: Provide the method (such as mechanical, hydraulic, etc.) and the equipment (such as backhoe, drag line, etc.) to be used to perform the dredging/excavation. This information allows field staff to evaluate the impacts of construction activity on the environment. If silt curtains are proposed during construction, provide information on the type of curtain and the anchoring method. Show the location of the silt curtain on the site plan and cross-section drawings.

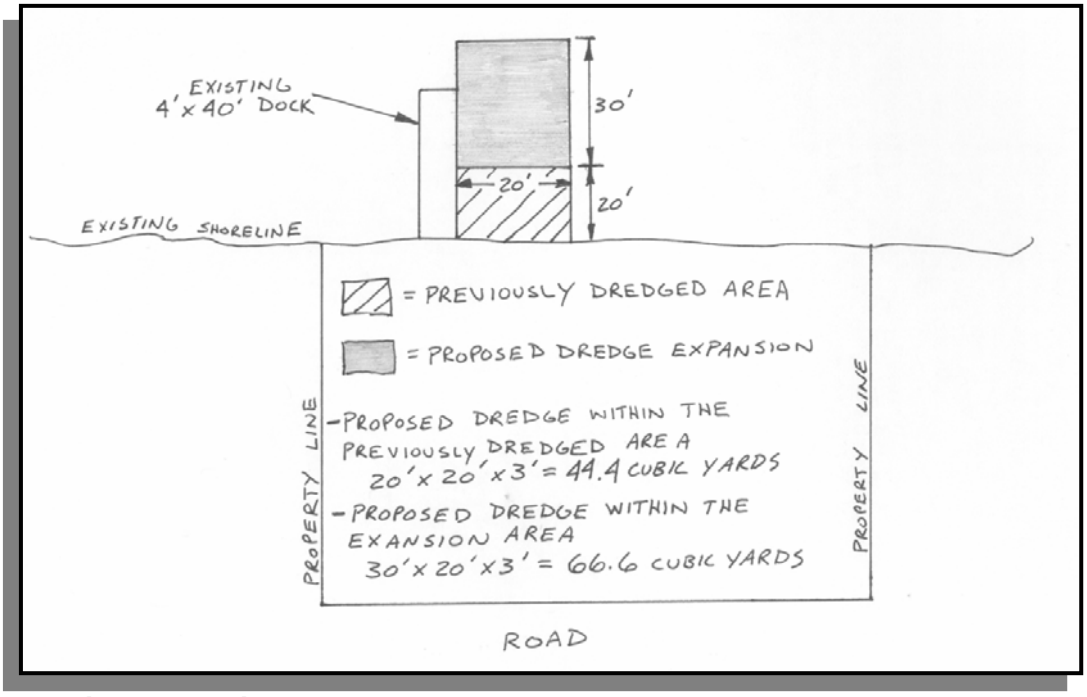
5. Has proposed dredge material been tested for contaminants: Check the box "No" or "Yes". If "Yes" is checked, provide a copy of the test results with the permit application. Only test results of 10 years or less can be accepted. If "No" is checked, sediment testing may be required for the proposed dredging project. For more detailed information on sediment testing, refer to Chapter 3. Also see the Sediment Testing Letter in Appendix J.

6. Will dredged or excavated spoils be placed on-site or off-site: Check the box "on-site" or "off-site". If the dredge/excavation spoils are to be placed on-site, show the location of the spoils area on the site plan. Provide detailed dimensions for the disposal area. If the dredge/excavation spoils are to be hauled off-site, provide a detailed vicinity map for the disposal area and a site plan for the disposal site that specifies the proposed location on-site of the spoils. Provide distances from existing property lines to the proposed spoils area(s). If spoils will be placed adjacent to wetland and/or floodplain, show the exact location of the spoils area(s) and the distance from the wetland and/or floodplain boundary.

> Depending on the volume of dredge materials, whether the area is suspected of soil contamination, and where the spoils are proposed to be disposed, sediment testing or other handling options may be required. See Appendix J.

7. Has this same area been previously dredged: Check the box "No" or "Yes". If "Yes" is checked, provide the date the area was previously dredged and the former permit number,

if available. Also, if the area was previously dredged and if it is proposed to enlarge the previously dredged area, check the next box "Yes." If the previously dredged area is proposed to be expanded, then on the site plan and cross section drawings clearly delineate both the previously dredged area and the proposed expanded area, indicate the overall dimensions (length, width, and depth) of each, and cross hatch or shade one of the areas.



Dredge Expansion

8. Is long-term maintenance dredging planned: Check the box "No" or "Yes." If long term maintenance dredging is proposed, specify when the maintenance dredging is proposed to take place and how much material will be removed. This information allows field staff to fully evaluate the proposal and determine an appropriate expiration date of the permit.

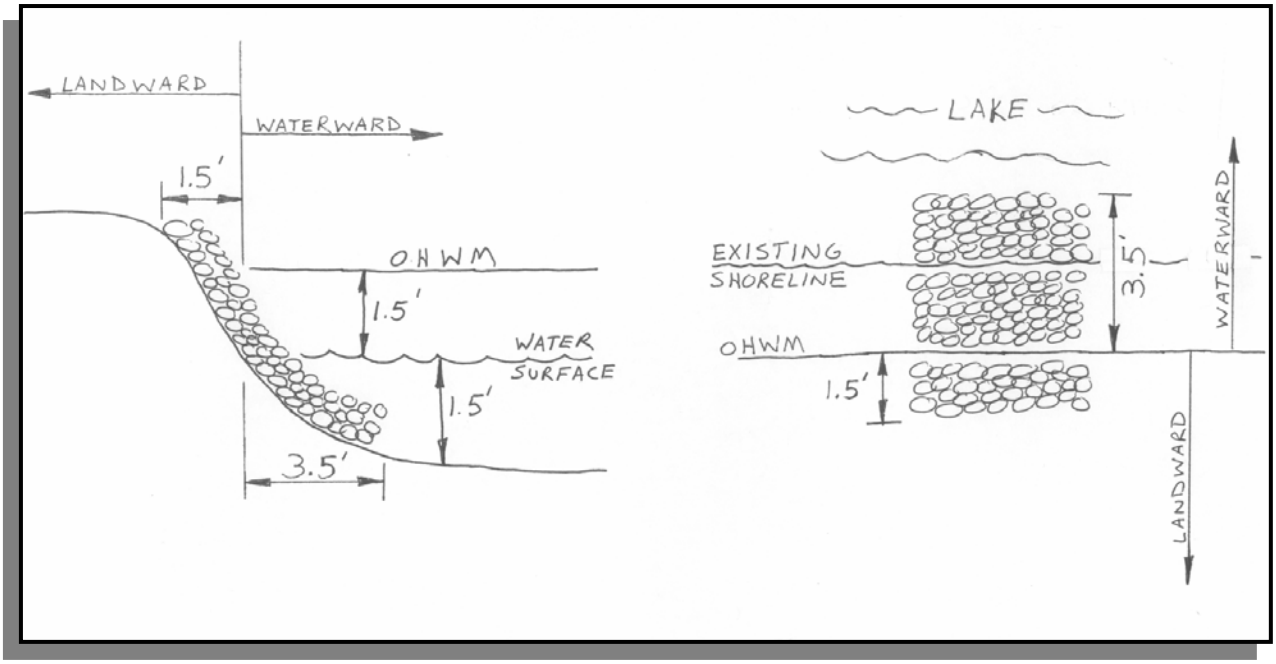
EXAMPLE: Maintenance dredge 1,000 cubic yards of material from the same area each September on a yearly basis for the next 5 years.

MDEQ Permits, including their extensions, can only be issued for a maximum of 5 years. The USACE can approve maintenance dredging up to 10 years under an Individual Permit. A 5 year maintenance dredging permit may be issued by the USACE under a "Letter of Permission".

SECTION 10C: Projects Requiring Riprap

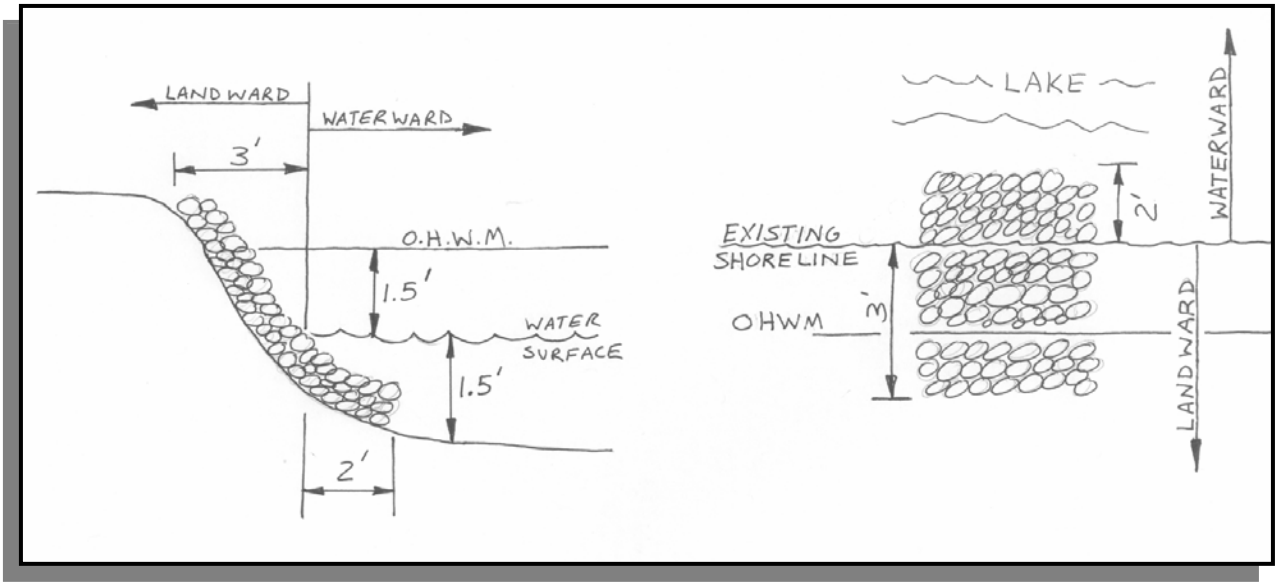
Riprap is generally used when stabilizing a slope and is generally constructed in layers. Riprap is also placed along bottomland on the waterward side of a seawall to help prevent undermining of the structure, provide habitat for aquatic organisms, and allow ingress and egress for amphibians and reptiles. If riprap is proposed to be installed in multiple areas for a project, **do not** combine the total dimensions and volumes into one. Provide separate dimensions and volumes for each area of riprap proposed. See Section 10A for a sample table format.

1	☐ **C. PROJECTS REQUIRING RIPRAP** (See Sample Drawings 2, 3, 8, 12, 14, 17, 22, and 23. Others may apply)				
	Riprap **waterward** of the ☐ *shoreline* **OR** ☐ *ordinary high water mark*	Dimensions (ft) length	2 width	depth	Volume (cu yd) 3
4	*Riprap* **landward** of the ☐ *shoreline* **OR** ☐ *ordinary high water mark*	Dimensions (ft) length	5 width	depth	Volume (cu yd) 6
7	Type of *riprap* ☐ field stone ☐ angular rock ☐ other_____				
8	Will *filter fabric* be used under proposed *riprap*? ☐ No ☐ Yes (**If Yes,** type)				

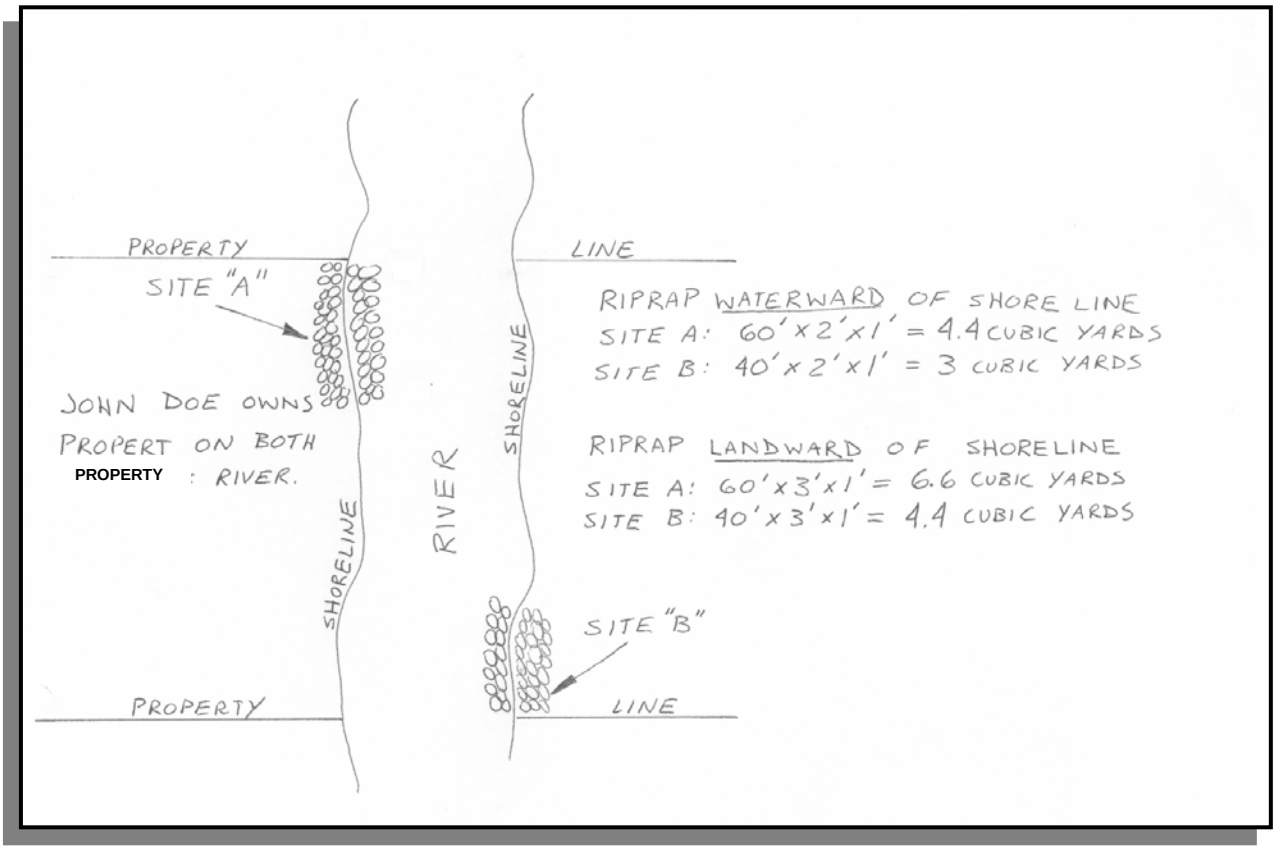


Waterward/Landward of OHWM

- Though not illustrated in these diagrams, show 1) the preferred use of geotextile fabric under the stone and 2) if the toe stone is embedded into the bottom to prevent undercutting.



Waterward/Landward of Shoreline



Multiple Riprap Areas

1. **Riprap waterward of the shoreline or Ordinary High Water Mark (OHWM):** Indicate whether the riprap dimensions waterward were taken from the shoreline (current water level) or taken from the OHWM.

2. **Dimensions:** Provide the length, width, and depth in feet of the riprap to be placed waterward of the shoreline or the OHWM.

3. **Volume:** Provide the volume in cubic yards of riprap to be placed waterward of the shoreline or OHWM.

Formula to Calculate Riprap Volumes:
(Length x Width x Depth) ÷ 27 = volume in cubic yards.

4. **Riprap landward of the shoreline or ordinary high water mark (OHWM):** Indicate whether the riprap dimensions landward were taken from the shoreline or taken from the OHWM.

5. **Dimensions**: Provide the length, width, and depth in feet of the riprap to be placed landward of the shoreline or the OHWM.

6. **Volume:** Provide the volume in cubic yards of riprap to be placed landward of the shoreline or OHWM.

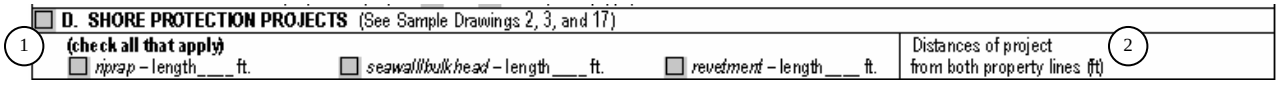
7. **Type of riprap:** The application lists typical types of riprap to select from. Check the box that indicates the type of riprap proposed. If the type proposed is not listed, please mark the "other" box and specify the type of rip-rap to be used. Field staff can guide the applicant on what type of rip-rap material may be best for the project site.

8. **Will filter fabric be used under proposed riprap:** Specify if a filter fabric will be used by checking "No" or "Yes". If "Yes" is checked, provide the type of filter fabric to be used. Filter fabric is necessary on natural shorelines. It stops wave action from pulling soils from the shoreline.

Remember: Any backfill that is proposed for the riprap project should be indicated in Section 10A

SECTION 10D: Shore Protection Projects

There are several ways to protect lake and stream shorelines from erosion due to waves, wind, and ice, and various designs and materials to choose from depending on site-specific conditions. Riprap consists of layers of rock. Seawalls (bulkheads) are generally constructed of sheet piling, wood, or concrete. Revetments, also constructed with layers of rock, is often used on slopes and may also incorporate biotechniques (plant matter). Shoreline protection methods may include inward returns or outward wings at the ends if they do not tie in with shoreline protection structures on adjacent properties.

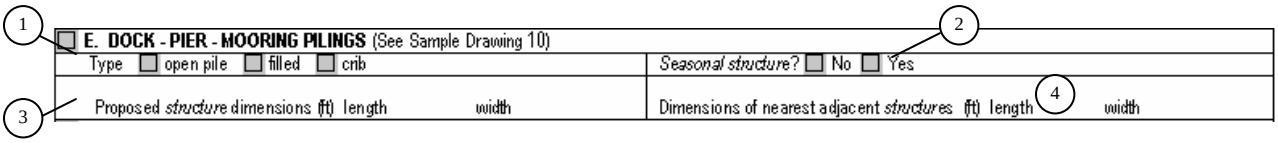


If shore protection will be installed at multiple locations, provide a table indicating the type of protection and its length at each proposed location.

1. **Check all that apply:** Check the box(es) that applies to the type(s) of shore protection proposed for the project. Also specify the linear feet of shore protection to be installed.

2. **Distances of project from both property lines:** If the proposed shoreline protection structure will not extend to the property lines, provide the distance in feet between the property lines and the ends of the proposed shore protection structure.

Section 10E: Dock – Pier – Mooring piles



This section should be completed for the construction of all projects with docks, piers, and mooring piles. Mooring buoys are covered in Section 10K. Projects that may result in "marina operation" are also covered in Section 19. Be sure to complete both this Section and Section 19 for the operation of a marina.

- A dock or docks constructed for recreational use by those other than then owner of the lot may qualify as a marina. Dock(s) on a site owned by multiple owners (such as a Lake Association) may also qualify as a marina.

If permanent structures will be installed to support a seasonal structure, a permit is required for the permanent support structures, therefore, this section must be completed in full.

1. **Type:** Specify the type of structure to be installed. Will it be open pile construction, will it be filled, or will it be a crib style construction? Check the box that best describes the style of construction for the structure.

2. **Seasonal Structure:** Check "No" or "Yes" as to whether the structure will be seasonal (placed in the spring removed in the fall each year). To be considered seasonal, no part of the structure (mooring, supports) can remain in the waterbody. In some cases a seasonal structure does not require a permit from the MDEQ, though does require a permit from the USACE. In these cases the application is forwarded to the USACE for processing.

Note: *If permanent support pilings (left in all year, including winter) will be used, the structure is not considered to be temporary.*

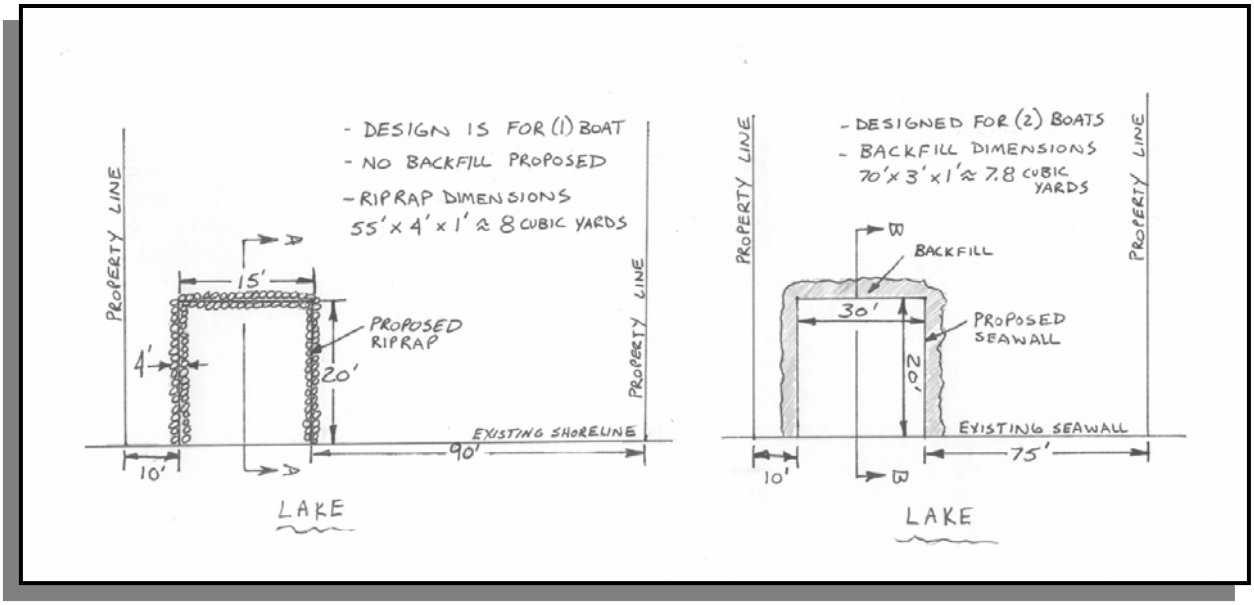
3. **Proposed structure dimensions:** Specify the length and width in feet of the proposed structure.

4. **Dimensions of nearest adjacent structures:** Specify the length and width in feet of the nearest adjacent structures (docks, piers, piles). This request is typically for the docks, piers, piles on the adjacent property owner's water frontage. The information is used to evaluate the proposed project in relation to its surroundings.

Section 10F: Boat Well

A boat well is a mooring site typically excavated inland from the water's edge. This section deals with the construction of a boat well. If excavation is proposed, also complete Section 10B.

1	☐ **F. BOAT WELL** (No Sample Drawing available) Type of bank stabilization ☐ wood ☐ steel ☐ concrete ☐ vinyl ☐ *riprap* ☐ other_____	
2	*Boat well* dimensions (ft) length width depth	Number of boats 3
4	Volume of backfill behind sidewall stabilization (cu yd)	Distances of *boat well* from adjacent property lines (ft) 5



Boat Well Plan

1. **Type of bank stabilization:** Check the box that best describes the type of bank stabilization that will be used for the interior sides and entrance to the boat well. Typical stabilizing material is listed. If the type proposed to be used is not listed, check the "other" box and specify the type of stabilization that will be used.

2. **Boat well dimensions:** Provide the length, width, and the beginning and ending depth of the proposed boat well area in feet.

3. **Number of boats:** Specify the number of boats that are proposed to be moored within the proposed boat well.

4. **Volume of backfill behind sidewall stabilization:** The dimensions for the backfill area are not requested in this section of the application, but should be included in Section 10A. If backfill is proposed behind the proposed stabilization, specify volume of fill proposed, along with the length, width, and depth.

Volume Calculation:

(Length x Width x Depth) ÷ 27 = volume

* The volume calculation formula is for English not Metric units.

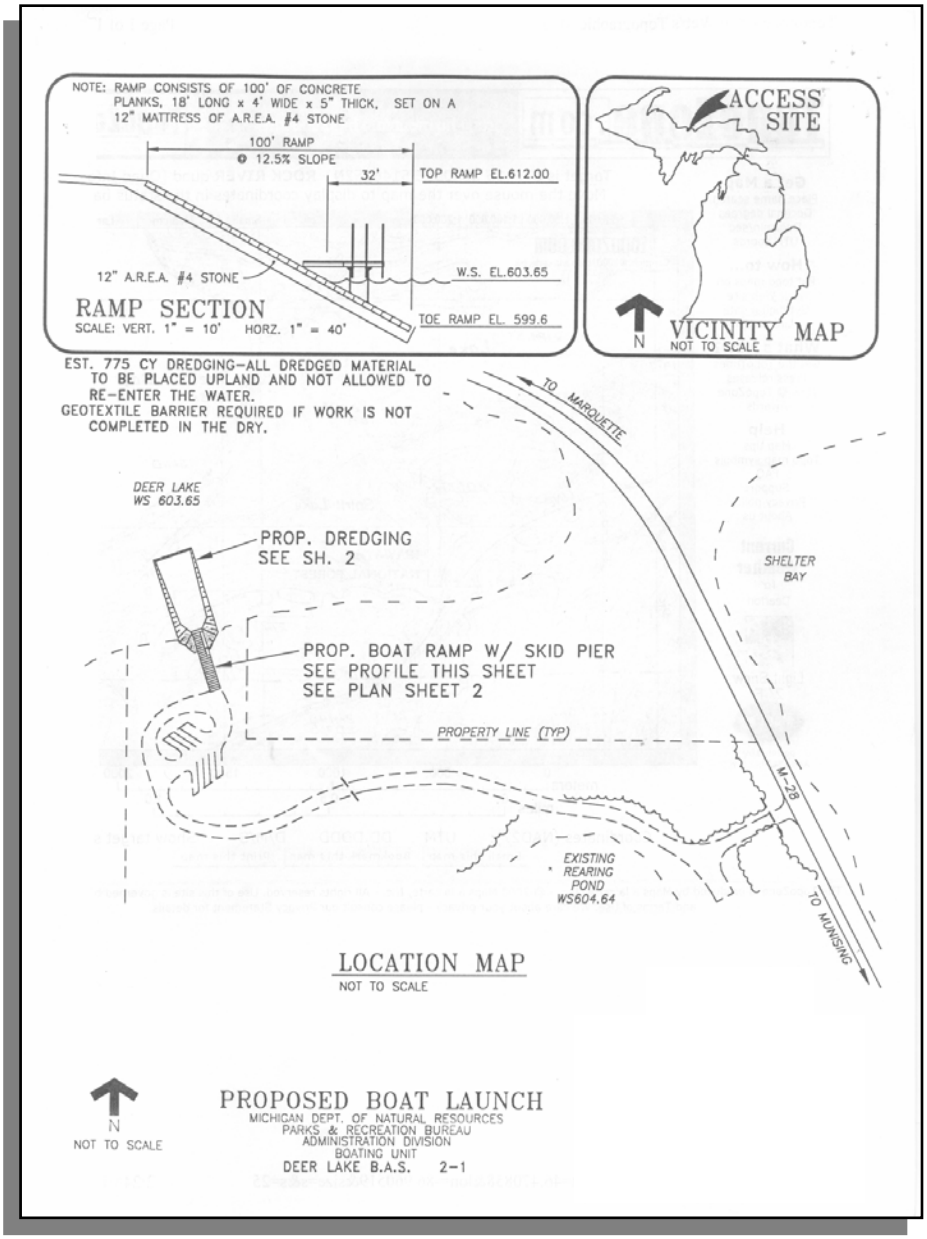
5. Distances of boat well from adjacent property lines: Provide the distance in feet from the adjacent property lines to the proposed boat well. If the proposed boat well will be waterward of the shoreline, provide the distance between the boat well and the property line as though the property line extended out into the water.

SECTION 10G: Boat Launch

This section covers the construction of boat launches and boat ramps, as well as launches that accommodate other crafts such as hydroplanes. If fill, dredging, and/or rip-rap will be associated with construction of the launch, then complete sections 10A, 10B, and/or 10C of the application.

☐ **G. BOAT LAUNCH** (No Sample Drawing available) **(check all that apply)** ☐ new ☐ existing ☐ public ☐ private ☐ commercial ☐ replacement			
(2) Proposed overall boat launch dimensions (ft) length / width / depth		(3) Type of material ☐ concrete ☐ wood ☐ stone ☐ other_____	
(4) Existing overall boat launch dimensions (ft) length / width / depth		(5) Boat launch dimensions (ft) below *ordinary high water mark* length / width / depth	
(6) Distances of launch from both property lines (ft)		Number of skid *piers* (7)	Skid *pier* dimensions (ft) width (8) length

New Ramp Site Plan



1. **Check all that apply:** Specify if the boat launch is new, existing, public, private, commercial, or a replacement by marking the appropriate box(es).

> "Private" refers to single family residential use.

2. **Proposed overall boat launch dimensions:** If the boat launch is a new, expansion, or replacement launch, specify the total length, width, and depth in feet of the overall proposed boat launch. If expanding or replacing a launch, show the total size of the existing and proposed boat launches on the project plans.

3. **Type of material:** Specify if the type of material proposed for the boat launch will be concrete, wood, or stone by checking the appropriate box. If other materials will be used check "other" and specify the type of materials to be used for the construction.

4. **Existing overall boat launch dimensions:** If a boat launch already exists at the proposed project site, specify the length, width, and depth of the existing structure.

5. **Boat launch dimensions below ordinary high water mark:** If the proposed launch will extend below the OHWM, specify the length, width, and depth in feet of the structure below the OHWM of the waterbody. Also indicate dimensions below the OHWM on a cross sectional drawing.

6. **Distance of launch:** Specify the distance in feet the boat launch will be from both property lines. Also indicate the distance on the project site plan.

7. **Number of skid piers:** Typically a boat launch will have a skid pier (seasonal dock on skis/skids that is pulled out of the water each fall). If there is an existing launch on-site, specify the number of existing skid piers also on-site and the number of proposed skid piers for the boat launch. Also specify if the existing or proposed docks/piers to be used at the boat launch are seasonal or permanent structures (see discussion under Section 10E).

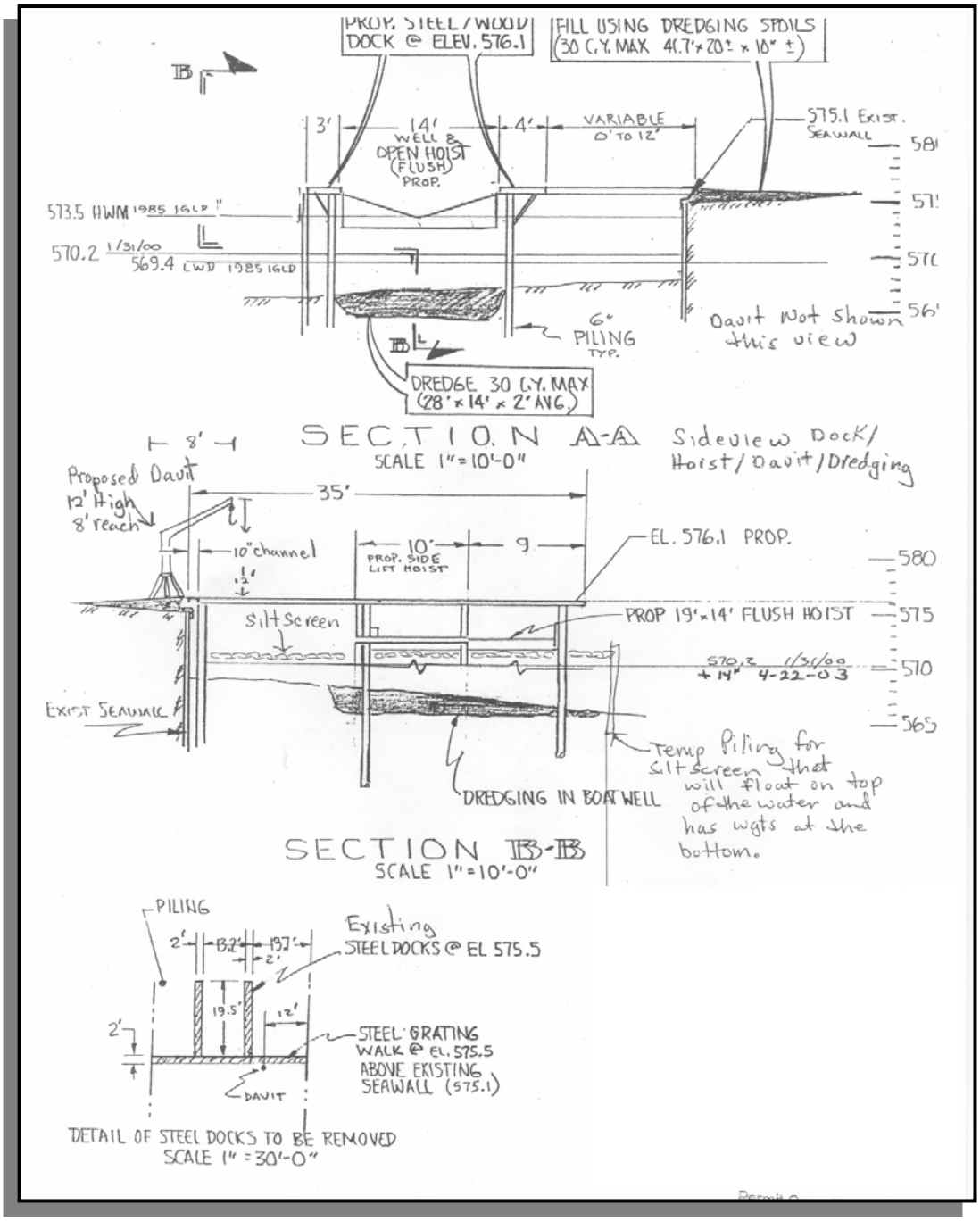
8. **Skid pier dimensions:** Specify the length and width in feet for each proposed skid pier.

Section 10H: Boat Hoist

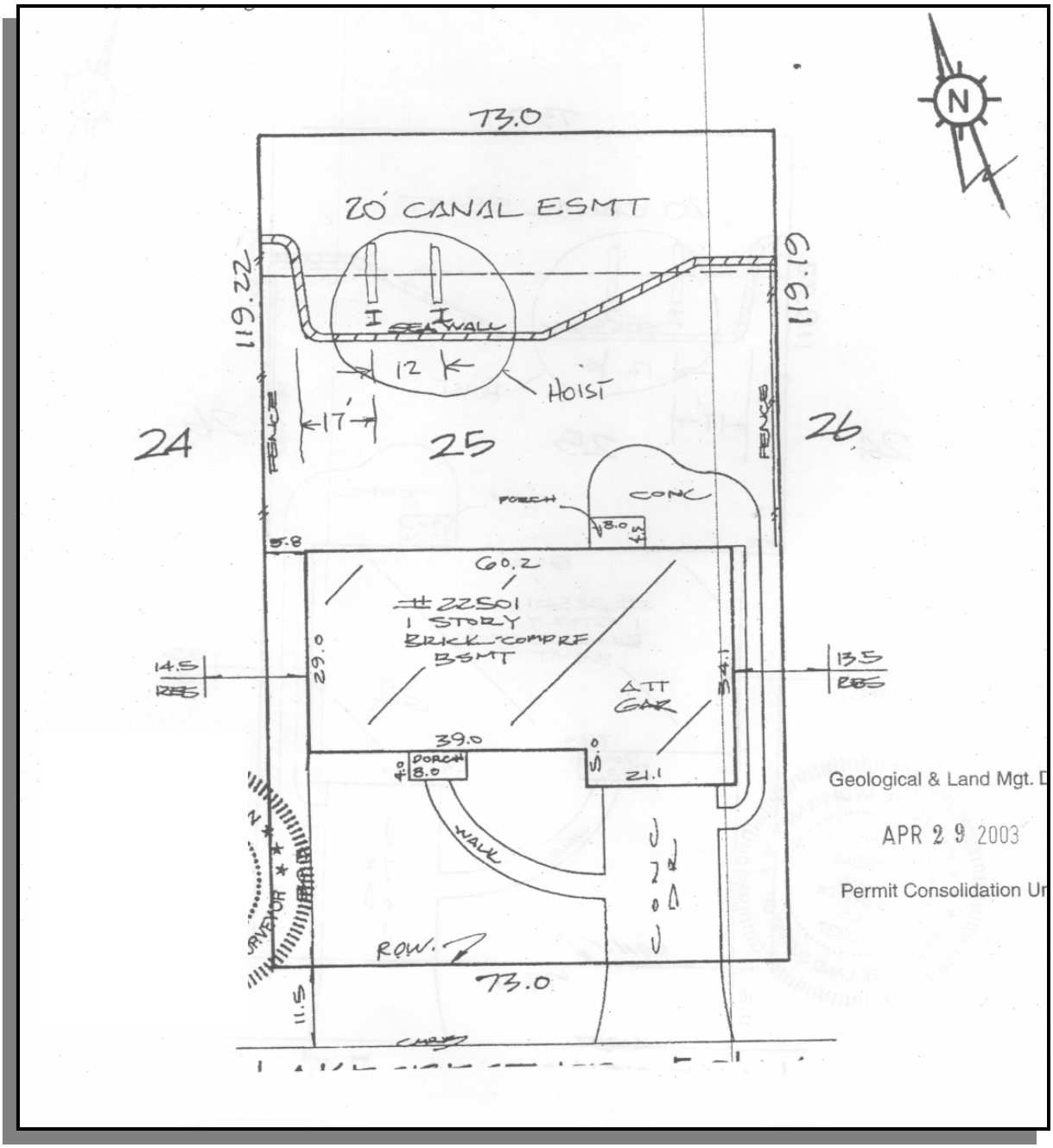
☐ **H. BOAT HOIST** (No Sample Drawing available)

(1) **(Check all that apply)** ☐ *seasonal* ☐ permanent ☐ cradle ☐ side lifter ☐ other _____ (2) located on ☐ *seawall* ☐ *dock* ☐ bottomlands

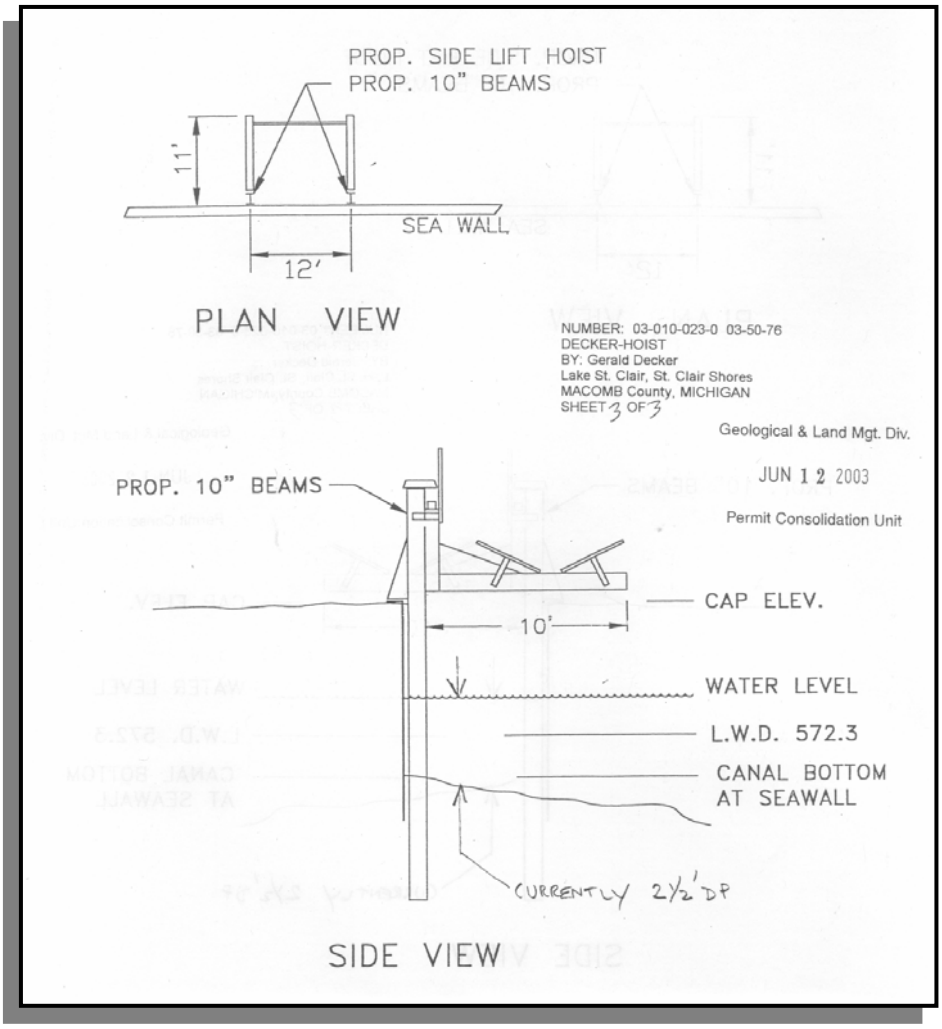
Although this section doesn't request it, provide the types of materials to be used for the boat hoist and the overall dimensions of the boat hoist structure. Also clarify if the hoist support structures will be of I-beam or finger pier construction.



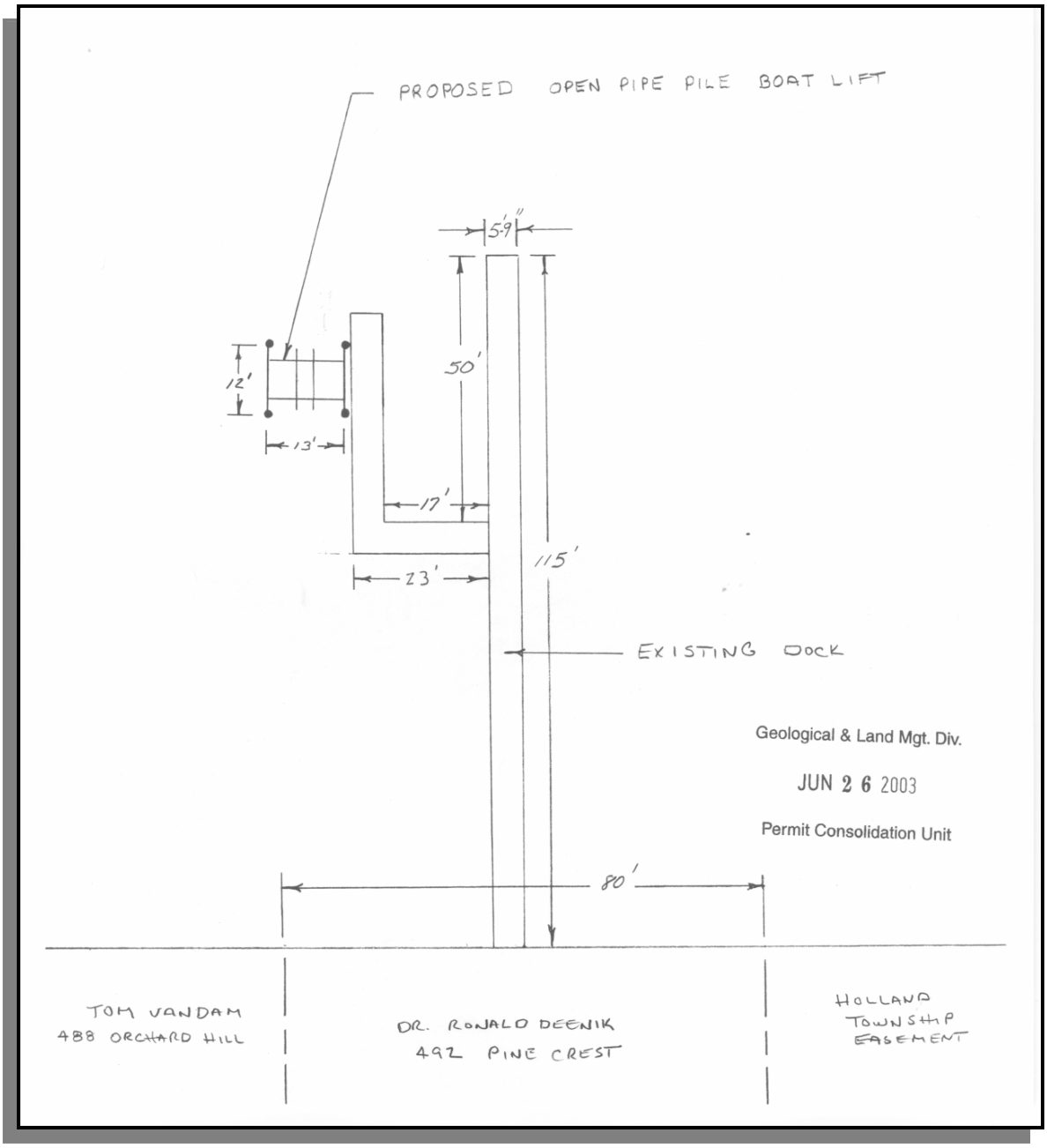
Hoist and Davit



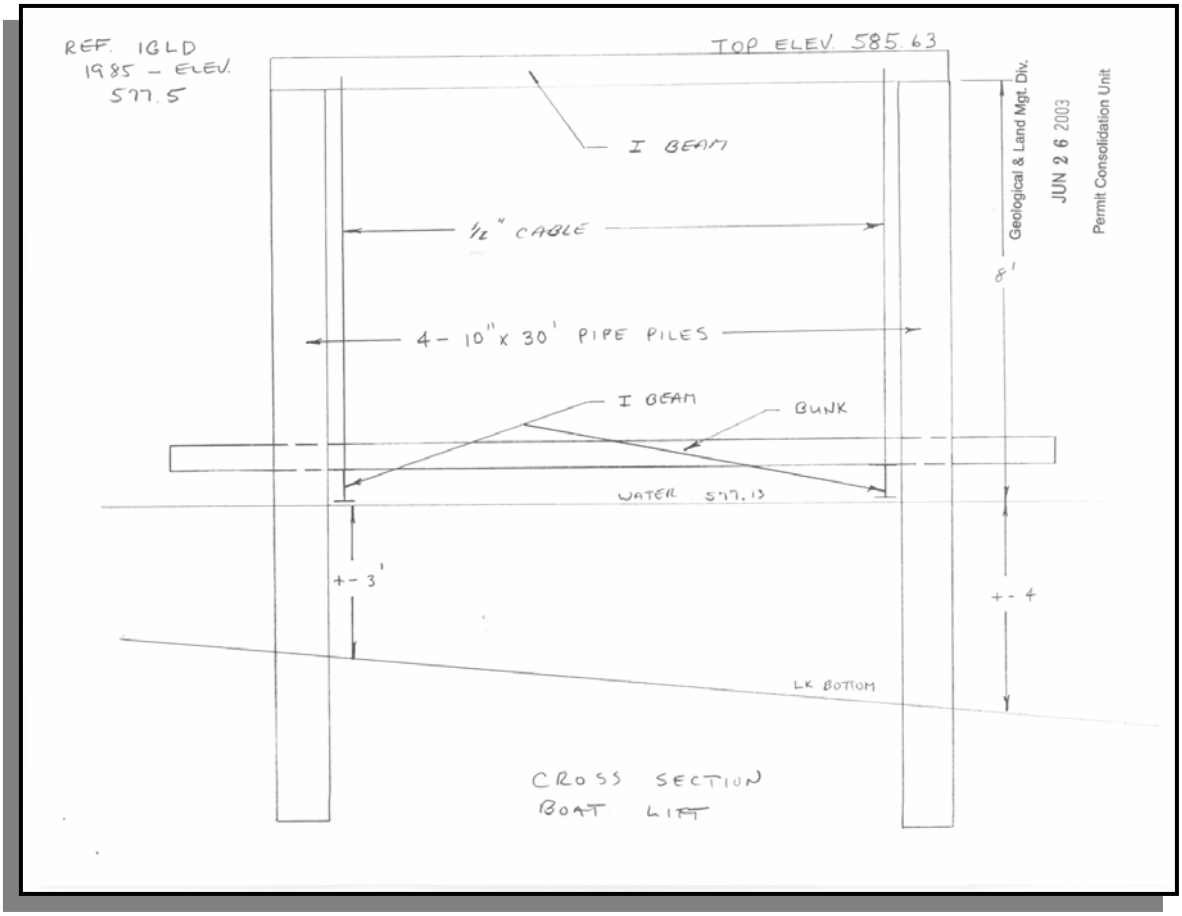
Hoist Sidelift Plan



Hoist Sidelift Section


PROPOSED OPEN PIPE PILE BOAT LIFT
5'9"
50'
12'
13'
17'
115'
23'
EXISTING DOCK
Geological & Land Mgt. Div.
JUN 2 6 2003
Permit Consolidation Unit
80'
TOM VANDAM
488 ORCHARD HILL
DR. RONALD DEENIK
492 PINE CREST
HOLLAND
TOWNSHIP
EASEMENT

Boat Lift

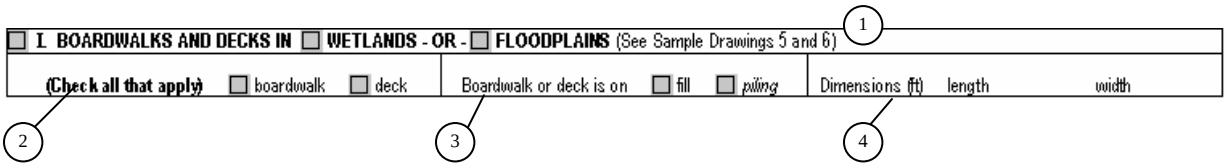


Boat Lift Section

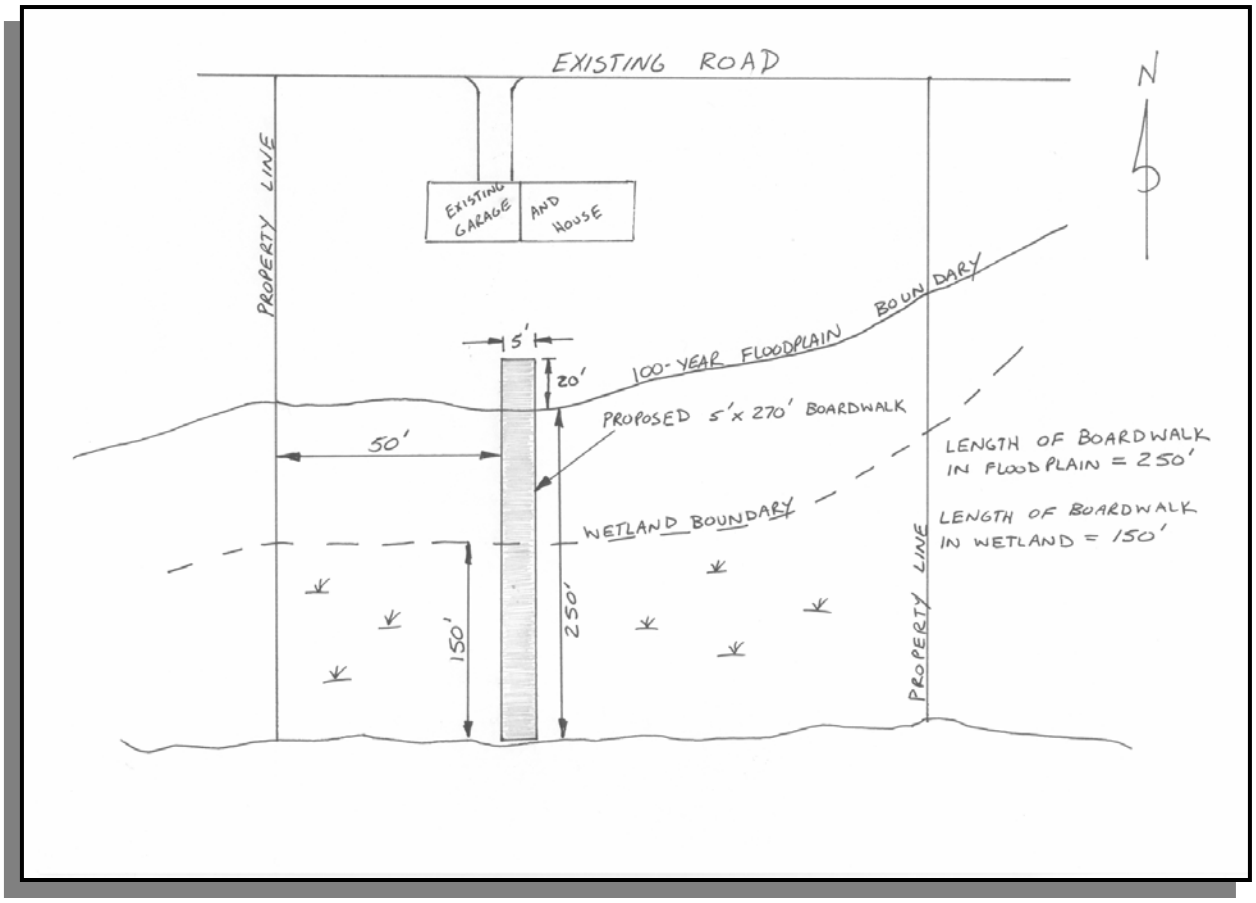
1. **Check all that apply:** Specify if the structure will be seasonal or permanent by checking the appropriate box (see discussion in Section 10E). Also specify if the hoist will be cradle style, side lifter, or other by checking the appropriate boxes. If "other" is checked, provide more detailed information about the proposed structure. Details may be provided on a separate page and attached to the application.

2. **Located on:** Check the appropriate box to specify if the proposed structure will be located on a seawall, dock, or on bottomlands.

SECTION 10I: Boardwalks and Decks in Wetlands or Floodplains



This section deals with the installation of decks and/or boardwalks within wetlands and/or floodplains. A deck is typically a raised structure. If the project will include boardwalks through wetlands and floodplains, **do not** combine the dimensions of the boardwalk or decks through the two areas. Instead, specify the dimensions of the boardwalk or deck that will be within the floodplain and specify the dimensions of boardwalk or deck that will be in the wetland. If viewing decks are proposed, dimensions for each deck must be provided.



Wetland Floodplain Boardwalk

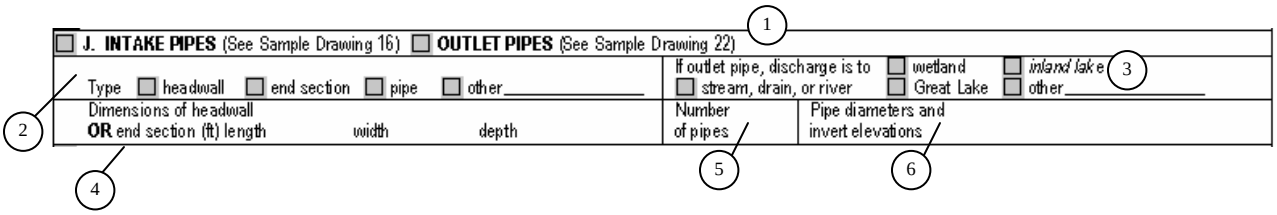
1. **Boardwalks and decks in wetlands or floodplains:** Specify if the boardwalks and/or decks will be within wetlands and/or floodplains by checking the appropriate box(es).

2. **Check all that apply:** Check the boxes that apply to the proposed project, specifically if the structures will be boardwalks or decks (viewing decks or platforms).

3. **Boardwalk or deck is on:** Check the appropriate box indicating whether the boardwalk or deck will be on fill or on pilings. If fill is proposed, complete Section 10A of the application.

4. **Dimensions:** Provide the dimensions in feet for each of the boardwalk sections and decks within wetlands and provide the dimensions for each of the boardwalk sections and decks within floodplains. If multiple crossings are proposed, provide the dimensions for each of the crossings. This can be provided in a table format and attached to the application. See Section 10A for sample tables.

Section 10J: Intake Pipes or Outlet Pipes



This section deals with the installation of intake and outlet pipes within wetlands, floodplains, inland lakes, streams, and the Great Lakes. If multiple outlet pipes are proposed for one project, specify the area where each pipe is proposed to discharge into (wetland, lake, stream, etc.) and provide all the requested detailed information for each of the outlet or intake structures. Information on multiple structures can most clearly be provided in a table and attached to the application. See Section 10A for sample tables. All information provided must be site-specific, not "typical."

1. **Intake pipes or outlet pipes:** For each pipe, specify what type of structure(s) are proposed for the project, by checking intake pipes, outlet pipes, or both.

2. **Type:** Check the appropriate box to indicate the type of structure to be used at the end of the outlet or intake structure. If "other" is checked, describe the type of structure to be used at the end of the pipe.

3. **If outlet pipe, discharge is to:** Specify which regulated area the proposed pipe(s) will discharge to by checking the appropriate box. If "other" is checked, provide a description for the proposed discharge area. When multiple pipes are proposed, specify the discharge points for each pipe on a separate attachment.

4. **Dimensions of headwall or end section:** If a headwall or end section is proposed at the end of the pipe(s), provide the dimensions (length, width, depth) for the headwall or end section.

5. **Number of pipes:** Specify the total number of pipes to be installed for the proposed project.

6. **Pipe diameters and invert elevations:** Specify the diameter of each pipe (clarify if it is an inside or outside diameter measurement) and its invert elevations.

Section 10K: Mooring and Navigation Buoys

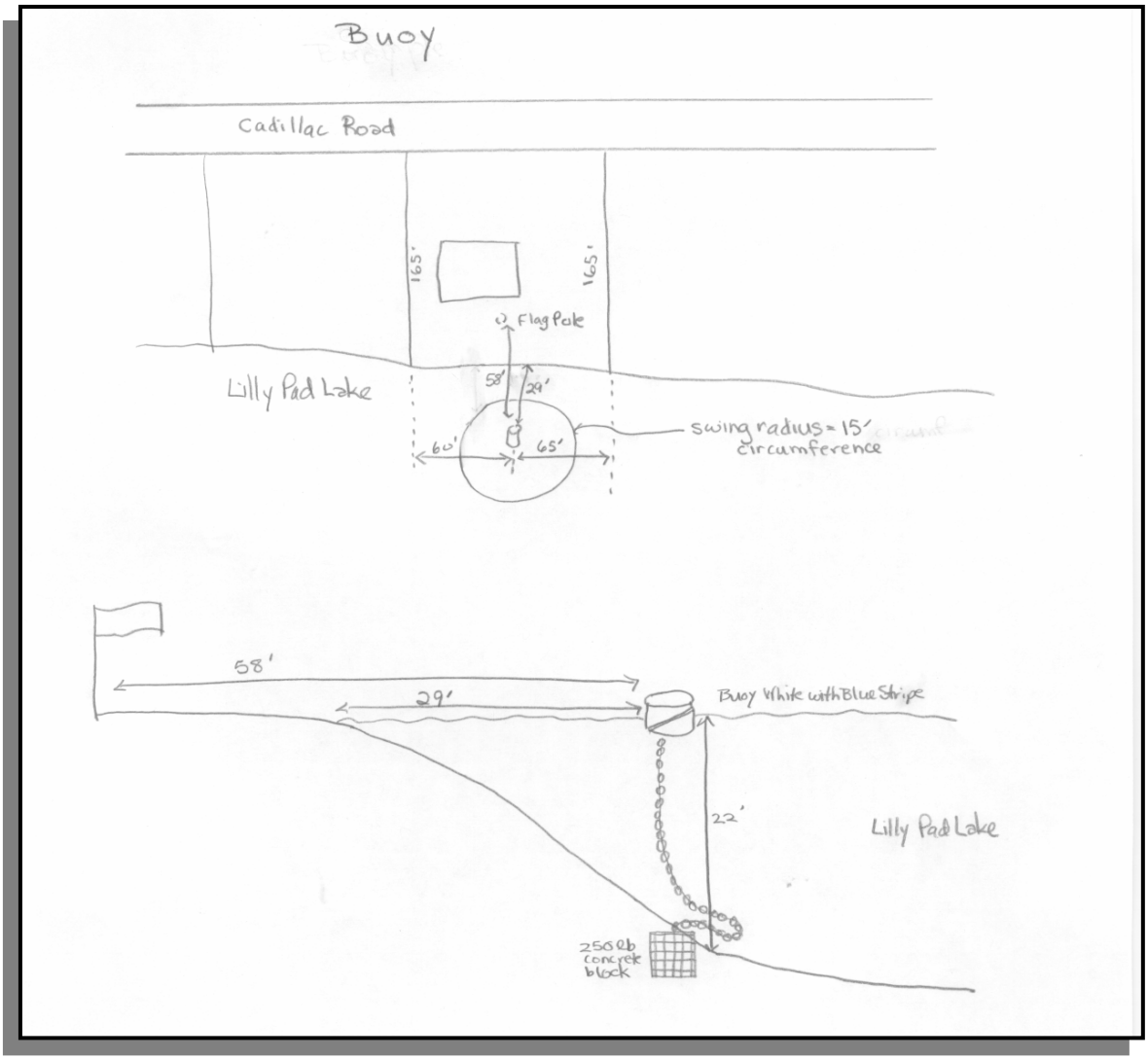
☐ **K. MOORING AND NAVIGATION BUOYS** (No Sample Drawing available)

- Provide an overall site plan showing the distances between each buoy, distances from the shore to each buoy, and depth of water at each buoy in feet.
- Provide cross-section drawing(s) showing anchoring system(s) and dimensions.

Number of buoys (1)	Type of anchor system (2)	Purpose of buoy (3) ☐ mooring ☐ navigation
Dimensions of buoys (ft) width (4) height		Do you own the property along the *shoreline*? ☐ No ☐ Yes (5) **If No,** you must provide an authorization letter from the property owner(s))

This section deals with the installation of mooring and/or navigation buoys. If the applicant is not the owner of the property along the shoreline where a buoy will be placed, a letter of authorization will be required from that landowner authorizing the applicant to place the buoy in front of his/her property. Other authorizations and/or permits may be required by the U.S. Coast Guard and/or USACE if the buoy will be located on Section 10 Waters.

A listing of Section 10 Waters is provided in Appendix I



Buoy and Swing Radius

1. **Number of buoys:** Specify the total number of buoys to be installed.

2. **Type of anchor system:** Specify the type of anchor system to be used for each buoy. Also provide detailed plans, with dimensions, for the anchor system.

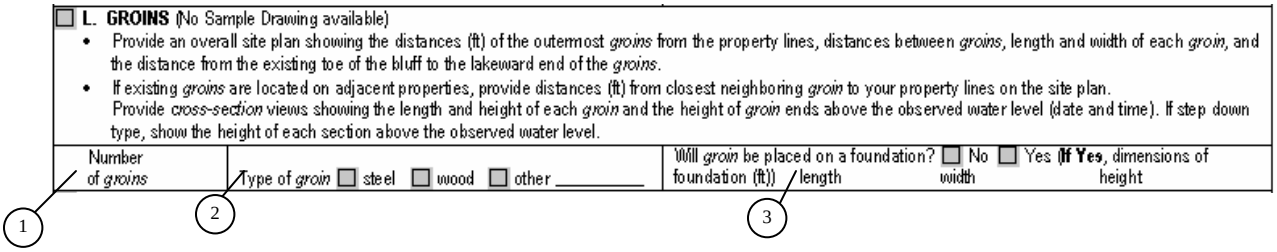
3. **Purpose of buoy:** Specify the purpose of the buoy(s) by checking either “mooring” or “navigation”. Also indicate if the proposed buoy will be seasonal. If the proposed buoy is intended as a permanent diving marker, indicate that in this box.

4. **Dimensions of buoys:** Specify the width and height in feet of the proposed buoys in feet.

5. **Do you own the property along the shoreline:** Specify if the applicant is owner of the property along the shoreline in which the buoy will be installed by checking “No” or “Yes”. If the applicant is not the owner, a letter of authorization is required from the property owner for installation of the buoy in front of his/her property.

   A site plan should show the location of the proposed buoy; the distance between the buoy and the shoreline, the property lines, and a permanent structure or fixed object on land; and the circumference of the swing range. A cross sectional drawing should show they type of buoy and the anchoring system; the distance from the shoreline; and depth of water at the proposed location of the buoy.

SECTION 10L: Groins



This section deals with the installation of groins along the shoreline of a waterbody. The scaled drawings attached to the application should include the distances of the outermost groin(s) to the property lines and to the nearest neighboring groin(s), distances between the propsed groins, and the distance between the toe of the bluff to the lakeward end of the groin, as well as dimensions. The cross section diagram should show the dimensions to scale and the height(s) in relationship to the observed water level.

1. **Number of groins:** Specify the number of groins to be installed on the property frontage.

2. **Type of groin:** Typical groin construction materials are listed. Specify the type of material proposed to be used for the construction of the groin by checking “steel,” “wood,” or “other.” If “other” is checked, specify the type of material proposed for the construction of the groin.

3. **Will groin be placed on a foundation:** Specify if the groin will be placed on a foundation by checking “No” or “Yes”. If the groin will be placed on a foundation, specify the length, width, height, and material of the proposed foundation. If fill is proposed, also complete Section 10A.

SECTION 10M: Fences in Wetland, Streams, or Floodplains

☐ **M. FENCES IN WETLANDS, STREAMS, OR FLOODPLAINS** (No Sample Drawing available)

- Provide an overall site plan showing the proposed fencing through wetlands, streams, or *floodplains*.
- Provide drawing of fence profile showing the design, dimension, post spacing, board spacing, and distance from ground to bottom of fence (if in a *floodplain*).

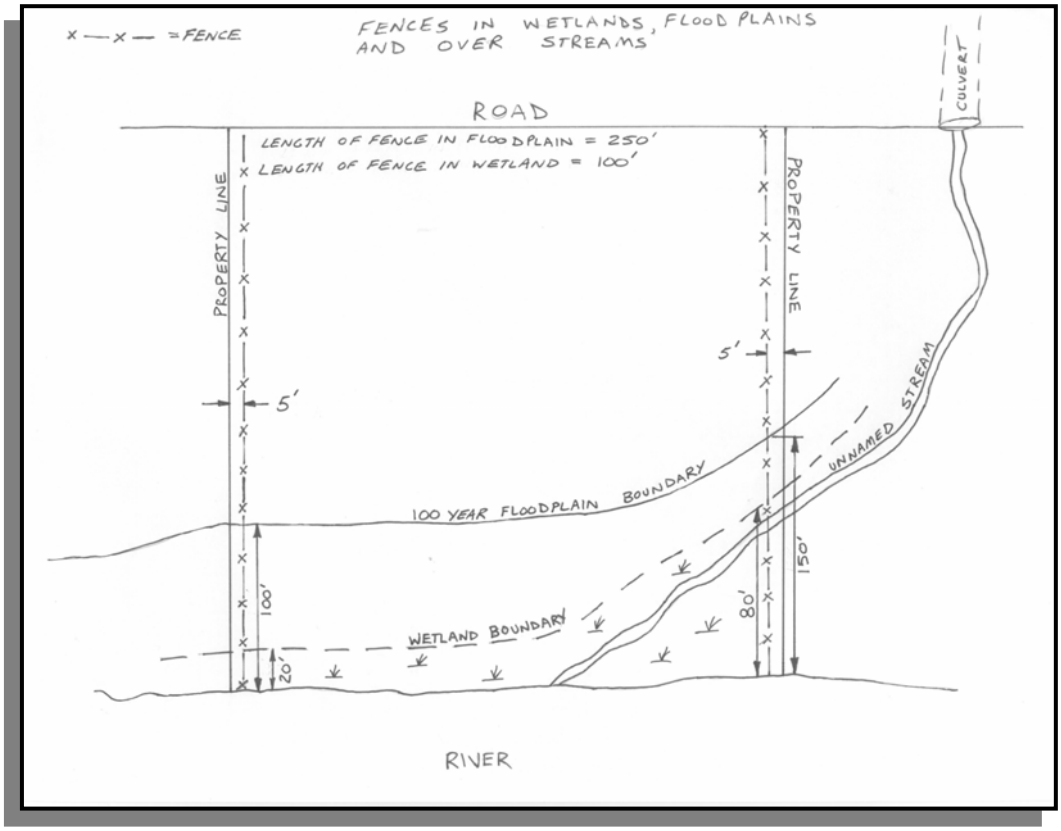
(check all that apply) ☐ wetlands ☐ streams ☐ *floodplains*	Total length (ft) of fence through wetlands _____ streams _____ *floodplains* _____	Fence height (ft) _____	Fence type and material

1 2 3 4

This section deals with fences proposed to be installed within, going into, or crossing over a regulated waterbody and/or through or into wetlands or floodplains. Even though the fence material (such as the wire mesh and posts) will not be placed below the Ordinary High Water Mark (OHWM) a permit is required. Although it is not requested in the application, specify how the fence post will be installed and at what depths the posts will be placed. Show this on the attached profile diagram. This information can be provided under Section 2 of the application or as part of the Project Narrative. This information allows field staff to evaluate the potential environmental impacts of construction phase activities.

A profile is needed if the fence will be in a wetland, a stream, or crosses a floodplain, as well as in a floodplain.

Sections 10A, 10B, 12, 13, and/or 14 should be completed if an access or maintenance road is proposed along the perimeter of the fence and if any portion of the road will be located within a wetland, floodplain, lake, and/or stream.



Fenced Wetland Floodplain Stream

1. **Check all that apply:** If the fence will cross over or be placed within a regulated waterbody such as wetland, stream, or floodplain, check the appropriate box.

2. **Total length of fence through:** In the appropriate box specify the total length in feet of fence through wetland, over or within streams, and through floodplains. If multiple wetlands, streams, or floodplain areas are to be crossed, specify the length for each section of wetland, stream or floodplain to be crossed. This information can be provided in a table and attached to the application. See Section 10A for sample tables.

3. **Fence height:** Provide the total vertical height of the fence through each segment of wetland, stream and/or floodplain and the height above the wetland, stream, and/or floodplain in feet.

4. **Fence type and material:** Specify the type of fence and material to be used for the project.

   Although not in the application, specify if a gate will be installed and how it is proposed to be operated (swing, break, electric, etc.). Also show the proposed location of the gate on the project site plan.

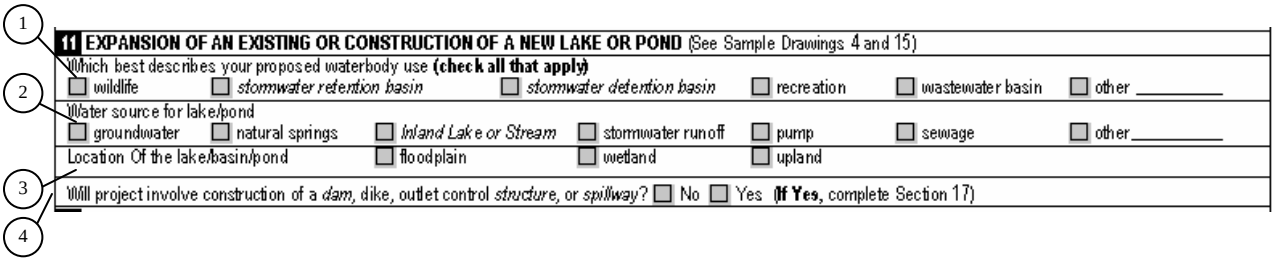
SECTION 10N: Other

☐ **N. OTHER** - e.g., structure removal, marine railway, low sand trap wall, breakwater, and structural foundations in wetlands or floodplains

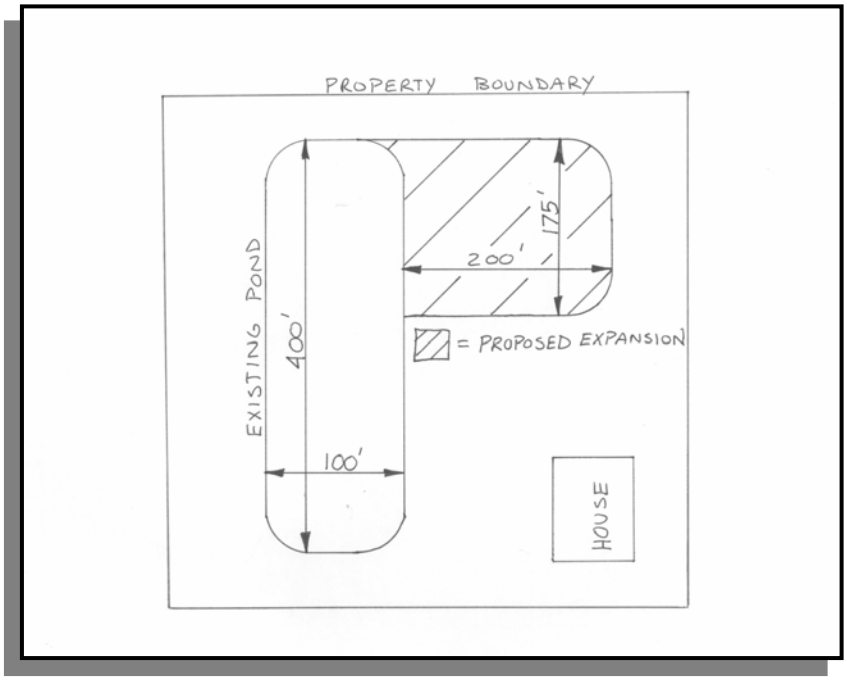
This section is designed to allow the applicant to add any other activity that is proposed within wetlands, floodplains, inland lakes, streams, or Great Lakes that is not covered by any of the categories provided in Sections 10A through 10M. Provide a brief description of the activity, including dimensions and volumes for the proposed impact areas.

EXAMPLE: Removal of a bridge or culvert without a replacement.

SECTION 11: Expansion of an Existing or Construction of a New Lake or Pond



This section is for the expansion of an existing, or the construction of a new, lake or pond. Lakes or ponds in wetlands, over 1 acre in size, or within 500 feet of an inland lake or stream require a permit. The existing and proposed permanent water surface areas (length x width) should be provided for all lake or pond activities. This information should also be provided in the project description in Section 2 of the application or on the required plans.



Pond Expansion

1. **Which best describes your proposed waterbody use (check all that apply):** Various uses of waterbodies are provided in the application to select from. Specify the use of the proposed waterbody by checking all of the boxes that are applicable. If "other" is checked, provide a full description of the proposed use of the waterbody (such as for a fish pond). This should be elaborated on in the Section 4 purpose summary.

2. **Water source for lake or pond:** The water source for the lake or pond can come from a variety of sources, which are included here. Specify the type(s) of water source(s) that will be used to create and maintain water levels within the proposed lake or pond by checking

the appropriate box(es). If “other” is checked, provide a detailed description of the water source to be used for the lake/pond.

3. **Location of lake, basin or pond:** Specify if the lake, basin or pond will be located within a floodplain, wetland, and/or upland area by checking the appropriate box(es).

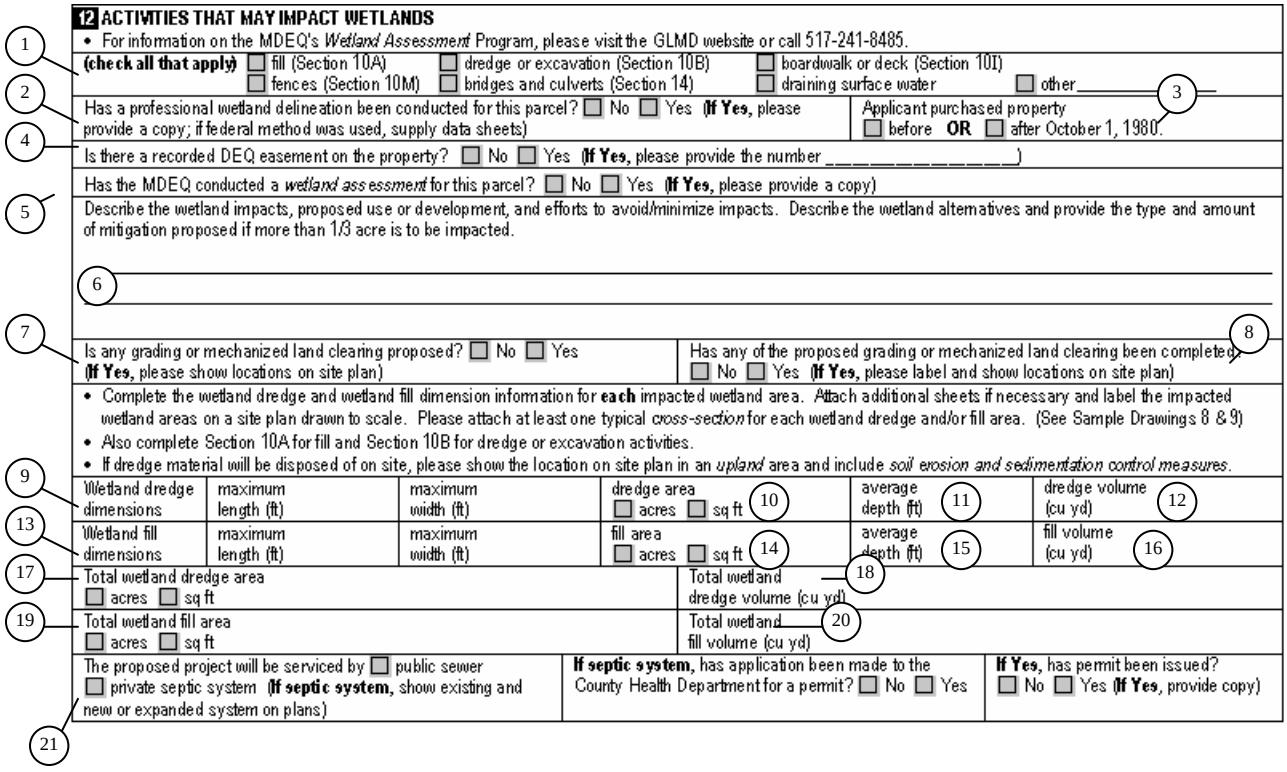
4. **Will project involve construction of a dam, dike, outlet control structure, or spillway:** Specify if the project will involve construction of a dam, dike, outlet structure, or spillway by checking “No” or “Yes” If “Yes” is checked, complete Section 17 of the application.

If the proposed lake or pond will be located in a floodplain or wetland, complete section 10B of the application.

SECTION 12: Activities That May Impact Wetlands

This section covers in more detail projects located within wetlands as well as proposals for wetland restoration. Also be sure to fill out appropriate parts of Section 10 that are relevant to the proposed project. For example, if the proposed wetland activities include fill, complete Section 10A; if the proposed wetland activities include dredging or excavation, complete Section 10B of the application; if the proposed project includes a boardwalk, deck, or platform, complete Section 10I, and if fencing is proposed, complete Section 10M. If the proposed project involves multiple wetland dredge and/or excavation areas or multiple wetland fill areas, provide separate dimensions, volumes and surface areas of impacts for each of the areas. Information on multiple areas can be provided in a table and attached to the application. See Section 10A for sample tables.

Be sure that the wetland impacts provided in this section of the application match all other sections and plans that are submitted with the application. This section must be completed even if the net dredge and fill is zero (0).



12 ACTIVITIES THAT MAY IMPACT WETLANDS

- For information on the MDEQ's *Wetland Assessment* Program, please visit the GLMD website or call 517-241-8485.

1 **(check all that apply)** ☐ fill (Section 10A) ☐ dredge or excavation (Section 10B) ☐ boardwalk or deck (Section 10I) ☐ fences (Section 10M) ☐ bridges and culverts (Section 14) ☐ draining surface water ☐ other_____ 3

2 Has a professional wetland delineation been conducted for this parcel? ☐ No ☐ Yes (**If Yes,** please provide a copy; if federal method was used, supply data sheets)

Applicant purchased property ☐ before **OR** ☐ after October 1, 1980.

4 Is there a recorded DEQ easement on the property? ☐ No ☐ Yes (**If Yes,** please provide the number _____)

Has the MDEQ conducted a *wetland assessment* for this parcel? ☐ No ☐ Yes (**If Yes,** please provide a copy)

5 Describe the wetland impacts, proposed use or development, and efforts to avoid/minimize impacts. Describe the wetland alternatives and provide the type and amount of mitigation proposed if more than 1/3 acre is to be impacted.

6

7 Is any grading or mechanized land clearing proposed? ☐ No ☐ Yes (**If Yes,** please show locations on site plan)

8 Has any of the proposed grading or mechanized land clearing been completed? ☐ No ☐ Yes (**If Yes,** please label and show locations on site plan)

- Complete the wetland dredge and wetland fill dimension information for **each** impacted wetland area. Attach additional sheets if necessary and label the impacted wetland areas on a site plan drawn to scale. Please attach at least one typical *cross-section* for each wetland dredge and/or fill area. (See Sample Drawings 8 & 9)
- Also complete Section 10A for fill and Section 10B for dredge or excavation activities.
- If dredge material will be disposed of on site, please show the location on site plan in an *upland* area and include *soil erosion and sedimentation control measures*.

9 Wetland dredge dimensions	maximum length (ft)	maximum width (ft)	dredge area ☐ acres ☐ sq ft 10	average depth (ft) 11	dredge volume (cu yd) 12
13 Wetland fill dimensions	maximum length (ft)	maximum width (ft)	fill area ☐ acres ☐ sq ft 14	average depth (ft) 15	fill volume (cu yd) 16

17 Total wetland dredge area ☐ acres ☐ sq ft — Total wetland dredge volume (cu yd) 18

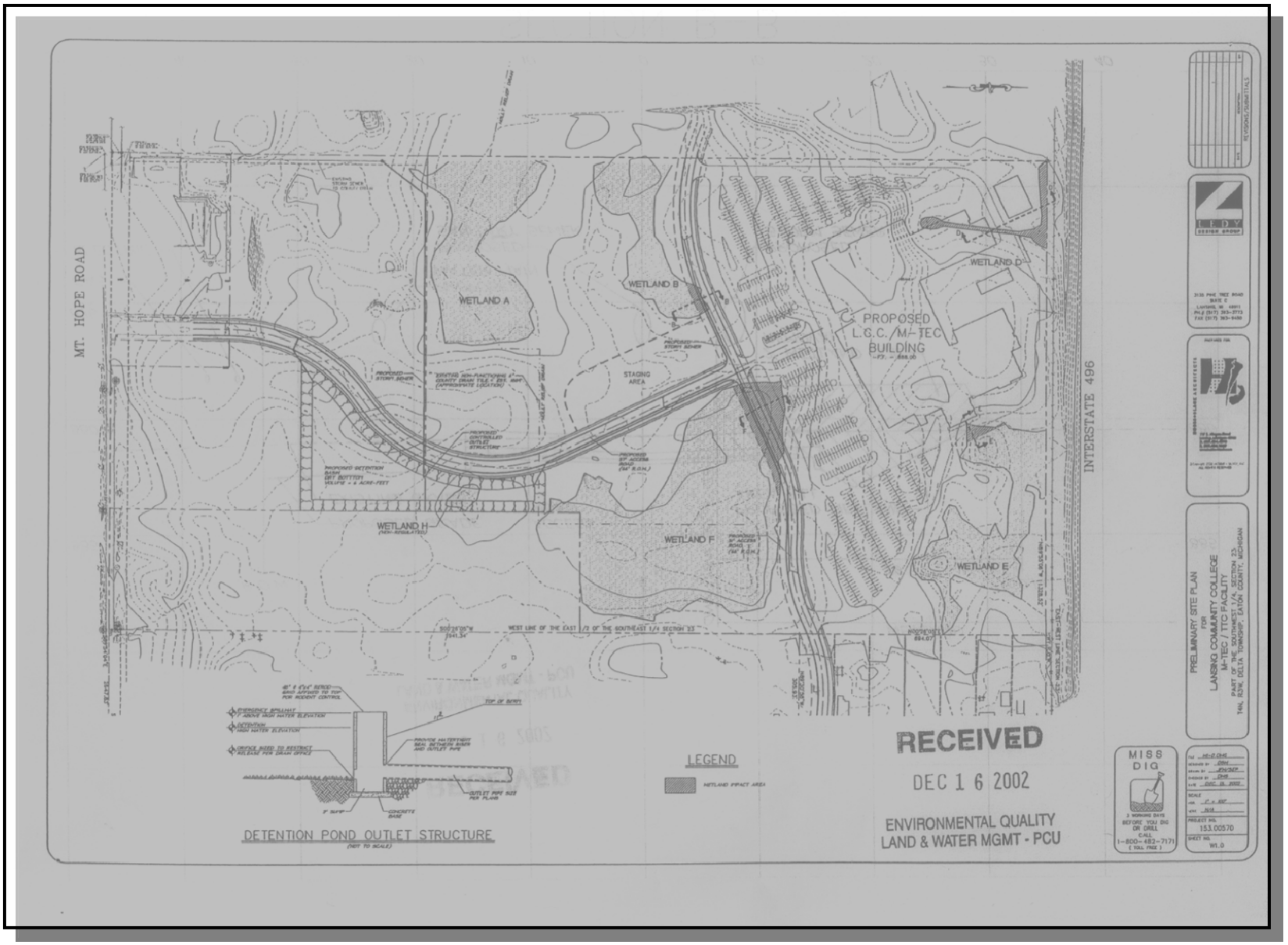
19 Total wetland fill area ☐ acres ☐ sq ft — Total wetland fill volume (cu yd) 20

21 The proposed project will be serviced by ☐ public sewer ☐ private septic system (**If septic system,** show existing and new or expanded system on plans)

If septic system, has application been made to the County Health Department for a permit? ☐ No ☐ Yes

If Yes, has permit been issued? ☐ No ☐ Yes (**If Yes,** provide copy)

If multiple wetland areas are present on the site, provide separate information for each wetland area. This information can be provided in a table as an attachment to the application. See Section 10A for sample tables.



Multiple Wetland Areas

1. **Check all that apply:** A list is of typical projects in wetlands is provided in this section; information on many of these activities are also covered in Section 10 of the application. Check all boxes that apply to the type of activities to be completed or structures to be installed within wetlands for the proposed project. If one of the areas checked reference another section of the application, complete that section and provide all of the necessary information.

2. **Has a professional wetland delineation been conducted for this parcel:** A wetland delineation defines the wetland boundaries on a parcel and can be done by a consultant or through the MDEQ Wetland Assessment Program (WAP). See Chapter 4 for more information about the WAP. It is not mandatory to have a professional delineation but wetlands and their impact must be clearly identified. In this section, specify if a wetland delineation has been conducted for the parcel in question by checking "No" or "Yes". If a professional wetland delineation has been completed, provide a copy of the delineation with the application submittal, and be sure the report indicates the date the delineation was done. If federal method was used, supply the data sheets.

> If a copy of the report is unavailable, indicate who established the boundary line, the season and/or date the boundary was established, and whether or not it was a surveyed boundary line.

3. **Applicant purchased property:** Specify if the property on which the project is proposed was purchased before or after October 1, 1980 by checking the appropriate box. This portion of the application is utilized in determining whether or not a project qualifies for a General Permit. If the property was inherited from a member of the current owner's immediate family, provide documentation demonstrating this transfer.

4. **Is there a recorded DEQ easement on the property:** Indicate whether or not there is a MDEQ easement located on the property by checking the appropriate box. If there is a MDEQ easement on the property, provide the easement number if it is known. If it is not known whether or not there is a MDEQ easement on the property, write "don't know" in this area of the application.

5. **Has the MDEQ conducted a wetland assessment for this parcel:** A wetland assessment determines if a wetland is present on a site. Specify whether or not a wetland assessment has been conducted by the MDEQ by marking the appropriate box "No" or "Yes". If the MDEQ has conducted a wetland assessment for the project site, provide a copy of the assessment with the application. See Chapter 3 for additional information on the MDEQ WAP.

6. **Describe the wetland impacts:** Provide a description of all proposed wetland impacts, proposed use or development, and efforts to avoid/minimize impacts to wetlands. Describe all alternatives to wetland impacts that have been considered. If more than 1/3 acre of wetland will be impacted by the proposed project, include a description of the proposed mitigation to compensate for the wetlands that will be lost. This can range from

a general statement to a narrative for the proposed mitigation. If mitigation is proposed and plans and details already exist, include these documents with the permit application. If details are not available, include a statement of whether or not mitigation will be included.

For larger projects in particular, information regarding wetland impacts should include a description of the ecological type of wetlands being impacted, and the functions and benefits that they provide. Shrub or scrub, emergent, and forested are example of ecological types of wetlands. Flood storage and habitat are examples of wetland functions and benefits. Also, environmental impacts should be site specific for the specific type of activity being proposed. For example, mining activities impart different impacts than residential development and would include impacts such as run-off to surface waters such as lakes and streams.

Mitigation is required for wetland fills greater than 1/3 acre

7. Is any grading or mechanized land clearing proposed: Specify if any grading or clearing is proposed within the wetland areas by checking "No" or "Yes". If grading or clearing is proposed, clearly indicate the area(s) on the project site plans and cross section(s), provide detailed dimensions of the area(s), and attach to the application submittal.

8. Has any of the proposed grading or mechanized land clearing been completed: Specify if any of the proposed grading or clearing within wetlands has already been completed by checking "No" or "Yes". If grading or clearing has been completed, specify when this work was conducted and indicate this area on the plans, and provide detailed dimensions. This information should be consistent with Section 7 of the application regarding project background/history.

9. Wetland dredge dimensions: Provide the maximum length and the maximum width in feet of dredge and/or excavation within each wetland area. If the wetland dredge area is very irregular in shape and an accurate maximum width and length can not be provided, enter "varies" for these dimensions, as long as the site plan clearly shows the wetland impact areas and is legible and accurately to scale.

10. Dredge area: Provide the surface area of dredge and/or excavation within each wetland area. This information should be provided either in square feet (width x length) or in acres.

11. Average depth: Specify the average depth of dredge and/or excavation in feet within each wetland area.

12. Dredge volume: Specify the volume, in cubic yards, of material to be dredged from each wetland area. The formula for estimating cubic yards is provided under Section 10A of this manual.

13. **Wetland fill dimensions:** Provide the maximum length and the maximum width in feet of fill within each wetland area. If the wetland fill area is very irregular in shape and an accurate maximum width and length can not be provided, enter “varies” for these dimensions as long as the site plan clearly shows the wetland impact areas and is legible and accurately to scale.

14. **Fill area:** Provide the surface area of fill to be placed within each wetland area. This should either be in square feet or in acres.

15. **Average depth:** Specify the average depth of fill within each wetland area.

16. **Fill volume:** Specify the volume of fill, in cubic yards, to be placed within each wetland area.

17. **Total wetland dredge area:** Provide the total area of wetlands to be dredged and/or excavated (this is the sum of all proposed dredge and/or excavation areas combined). Provide this surface area in either square feet or in acres.

18. **Total wetland dredge volume:** Provide the total volume in cubic yards of material to be dredged and/or excavated from wetlands (this is the combined sum of the volumes of proposed dredge and/or excavation within all wetlands)

19. **Total wetland fill area:** Provide the total area of wetlands to be filled (this is the sum of all proposed wetland fill areas combined). Provide this surface area in either square feet or in acres.

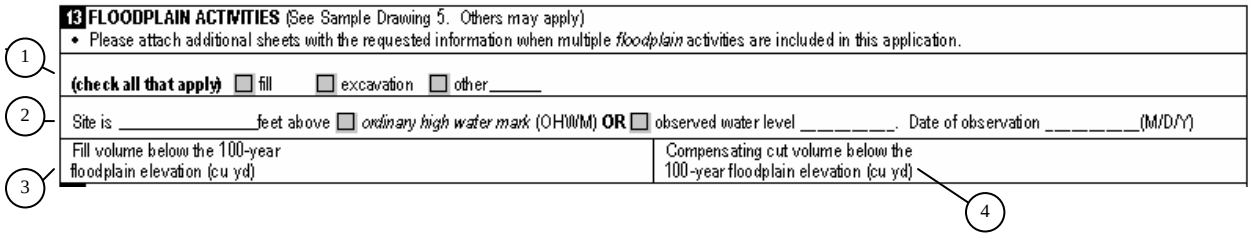
20. **Total wetland fill volume:** Provide the total volume in cubic yards of fill to be placed within wetlands (this is the sum of all of the combined volumes of fill proposed within all wetlands).

21. **The proposed project will be serviced by:** Specify if the proposed project will be serviced by a public sewer or by a private septic system by checking the appropriate box. If the project will be serviced by a septic system, be sure to show any existing or expanded system, or proposed new system on the project plan and indicate if an application has been made to the County Health Department for a permit by checking “No” or “Yes”. If an application has been made to the County Health Department, specify if a permit has been issued by checking “No” or “Yes”. If a permit has been issued by the County Health Department, provide a copy of the county permit along with this permit application submittal. This information should be consistent with Section 6 of the application.

SECTION 13: Floodplain Activities

This section covers in more detail projects located within floodplains. Also be sure to fill out appropriate parts of Section 10 that are relevant to the proposed project. For example, if the proposed floodplain activities include fill, complete Section 10A; if the proposed floodplain activities include dredging or excavation, complete Section 10B of the application; if the proposed project includes a boardwalk, deck, or platform, complete Section 10I, and if fencing is proposed, complete Section 10M. If the proposed project involves multiple floodplain dredge and/or excavation areas or multiple floodplain fill areas, provide separate dimensions and volumes of impacts for each of the areas. Information on multiple areas can be provided in a table and attached to the application. See Section 10A for sample tables.

Be sure that the floodplain impacts provided in this section of the application match all other sections and plans that are submitted with the application. This section must be completed even if the net dredge and/or excavation and fill is zero (0).



Although this section does not request the 100-year floodplain elevation for the site, if it is known it should be included here and provided on the plan and section drawings. If the 100-year floodplain elevation is known and detailed engineering plans are provided with the application, then also provide the volumes of fill below the 100-year floodplain elevation and the volumes of excavation (compensating cut) below the 100-year elevation. If the 100-year floodplain elevations are not know but the floodplain boundaries are known, include volumes of fill and excavation within the 100-year floodplain boundaries. The local municipality, FEMA, County Drain Commission, or a local surveyor may be able to provide the 100-year elevations for the general vicinity of the proposed project.

It is recommended that the local County Drain Commissioner, County Health Department and Municipal Clerks are notified of the intent to build in a floodplain. If their approval was obtained, include it with the JPA.

1. **Check all that apply:** Specify whether the proposed floodplain project involves fill, excavation, or both, or other by checking the appropriate box(es). If "other" is checked, provide a description of the "other" activity.

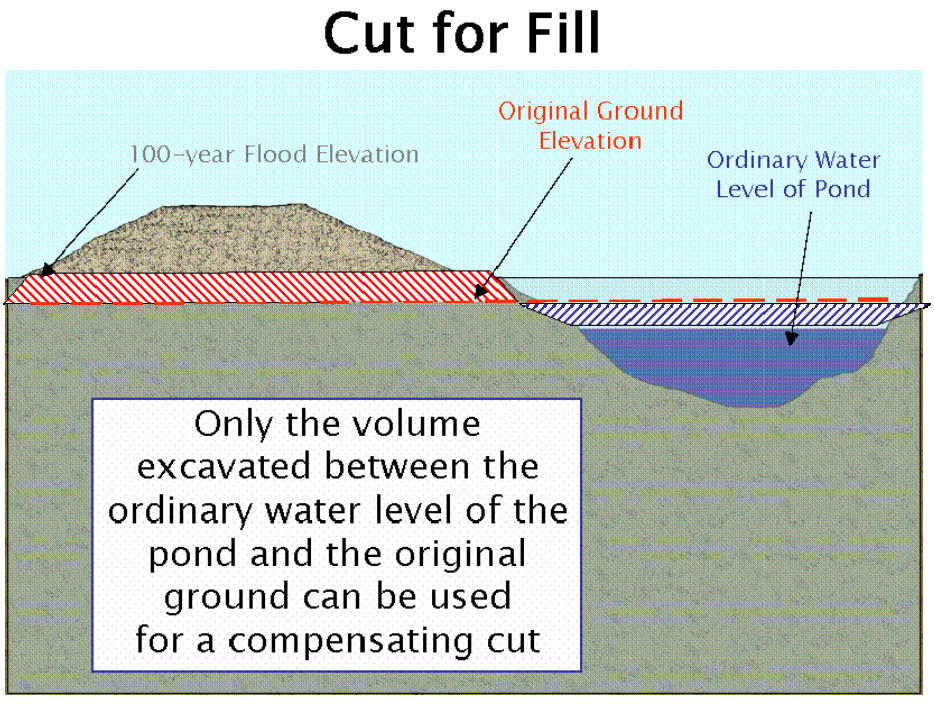
2. **Site is____feet above:** Specify how many feet above the ordinary high water mark (OHWM) or observed water level the proposed project will be. Also specify the month,

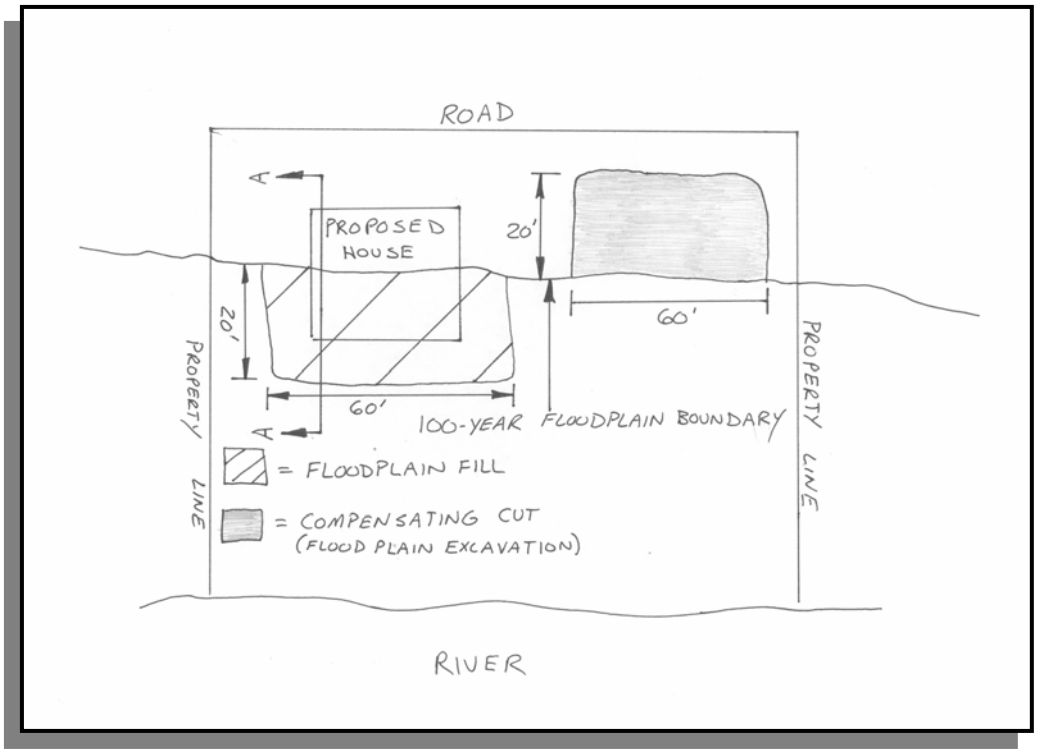
day, and year this observation (measurement) was made. This should be consistent with information provided in Section 10 of the application.

3. **Fill volume below the 100-year floodplain:** Specify the volume of fill in cubic yards proposed below the 100-year floodplain elevation for each separate river, stream, or drain floodplain area. If 100-year floodplain elevations are not known, but the floodplain boundaries are known, include volumes of fill within the 100-year floodplain boundaries. If the 100-year floodplain elevation is known and detailed engineering plans will be included with the application then provide the volumes of fill below the 100-year floodplain elevation.

4. **Compensating cut volume below the 100-year floodplain:** Compensating cut is excavation and/or dredging to mitigate fill within a floodplain. For compensating cut requirements in studied areas, contact the appropriate district floodplain engineer. See Appendix H for floodplain engineer jurisdictional boundaries. A list of studied areas is included in Appendix C under the Part 31 minor project criteria. Provide compensating cut in cubic yards for fill volumes exceeding 300 cubic yards. Cuts should be on-site and approximately the same elevations as the filled areas. Alternatively, a watershed hydrologic analysis that shows no adverse affect to stage and discharge characteristic of the watercourse may be provided in lieu of cut for fill.

   Specify the volume of excavation and compensating cut in cubic yards below the 100-year floodplain elevation for each individual river, stream, or drain. If 100-year floodplain elevations are not know but the floodplain boundaries are known then include volumes of excavation and compensating cut within the 100-year floodplain boundaries. If the 100-year floodplain elevation is known and detailed engineering plans will be provided with the application then provide volumes of excavation and compensating cut below the 100-year elevation.

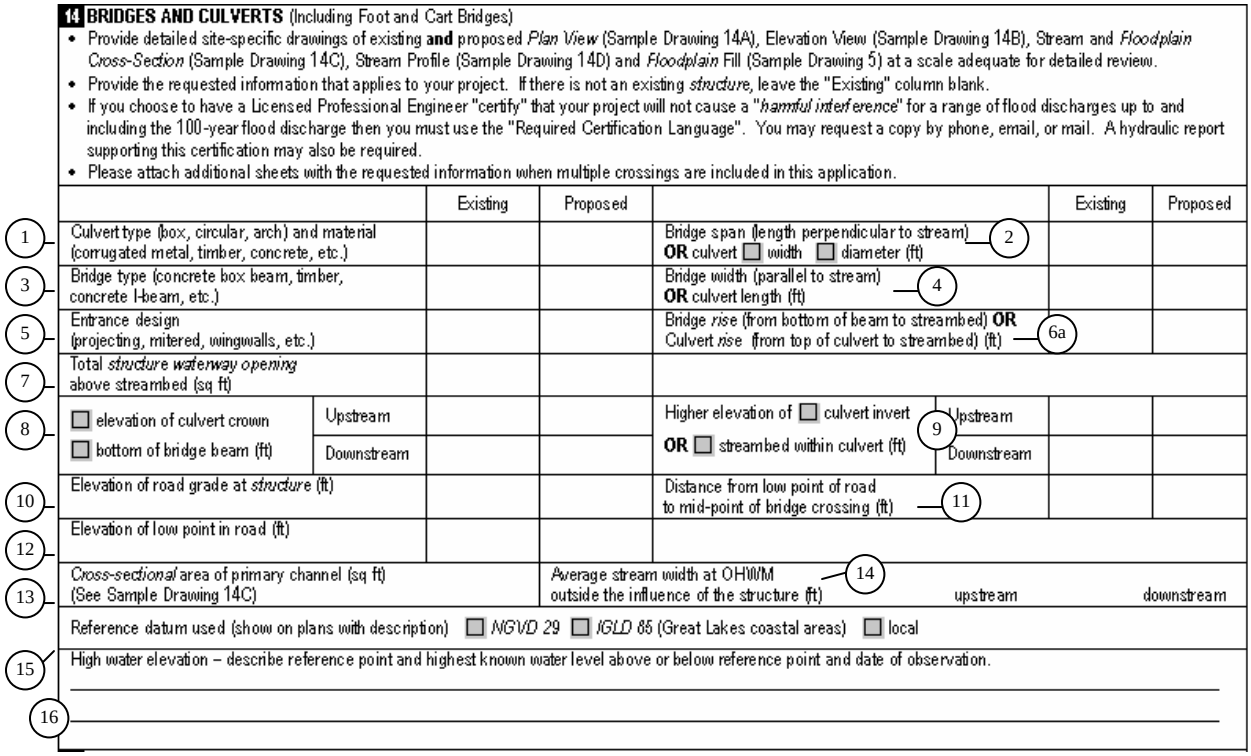




Floodplain Cut Fill Plan

If on-site basins or ponds with permanent surface water elevations are proposed, then the volume of compensating cut within the area of the basin or pond is the volume of excavation between the 100-year floodplain elevation and the permanent water elevation of the basin or pond. The area occupied by permanent water should not be considered as part of compensating cut volume.

SECTION 14: Bridges and Culverts



14 BRIDGES AND CULVERTS (Including Foot and Cart Bridges)

- Provide detailed site-specific drawings of existing **and** proposed *Plan View* (Sample Drawing 14A), Elevation View (Sample Drawing 14B), Stream and *Floodplain Cross-Section* (Sample Drawing 14C), Stream Profile (Sample Drawing 14D) and *Floodplain* Fill (Sample Drawing 5) at a scale adequate for detailed review.
- Provide the requested information that applies to your project. If there is not an existing *structure*, leave the "Existing" column blank.
- If you choose to have a Licensed Professional Engineer "certify" that your project will not cause a "*harmful interference*" for a range of flood discharges up to and including the 100-year flood discharge then you must use the "Required Certification Language". You may request a copy by phone, email, or mail. A hydraulic report supporting this certification may also be required.
- Please attach additional sheets with the requested information when multiple crossings are included in this application.

		Existing	Proposed			Existing	Proposed
1 Culvert type (box, circular, arch) and material (corrugated metal, timber, concrete, etc.)				Bridge span (length perpendicular to stream) 2 **OR** culvert ☐ width ☐ diameter (ft)			
3 Bridge type (concrete box beam, timber, concrete I-beam, etc.)				Bridge width (parallel to stream) 4 **OR** culvert length (ft)			
5 Entrance design (projecting, mitered, wingwalls, etc.)				Bridge *rise* (from bottom of beam to streambed) **OR** Culvert *rise* (from top of culvert to streambed) (ft) 6a			
7 Total *structure waterway opening* above streambed (sq ft)							
8 ☐ elevation of culvert crown ☐ bottom of bridge beam (ft)	Upstream			Higher elevation of ☐ culvert invert **OR** ☐ streambed within culvert (ft) 9	Upstream		
	Downstream				Downstream		
10 Elevation of road grade at *structure* (ft)				Distance from low point of road to mid-point of bridge crossing (ft) 11			
12 Elevation of low point in road (ft)							
13 *Cross-sectional* area of primary channel (sq ft) (See Sample Drawing 14C)				Average stream width at OHWM outside the influence of the structure (ft) 14	upstream		downstream

Reference datum used (show on plans with description) ☐ *NGVD 29* ☐ *IGLD 85* (Great Lakes coastal areas) ☐ local

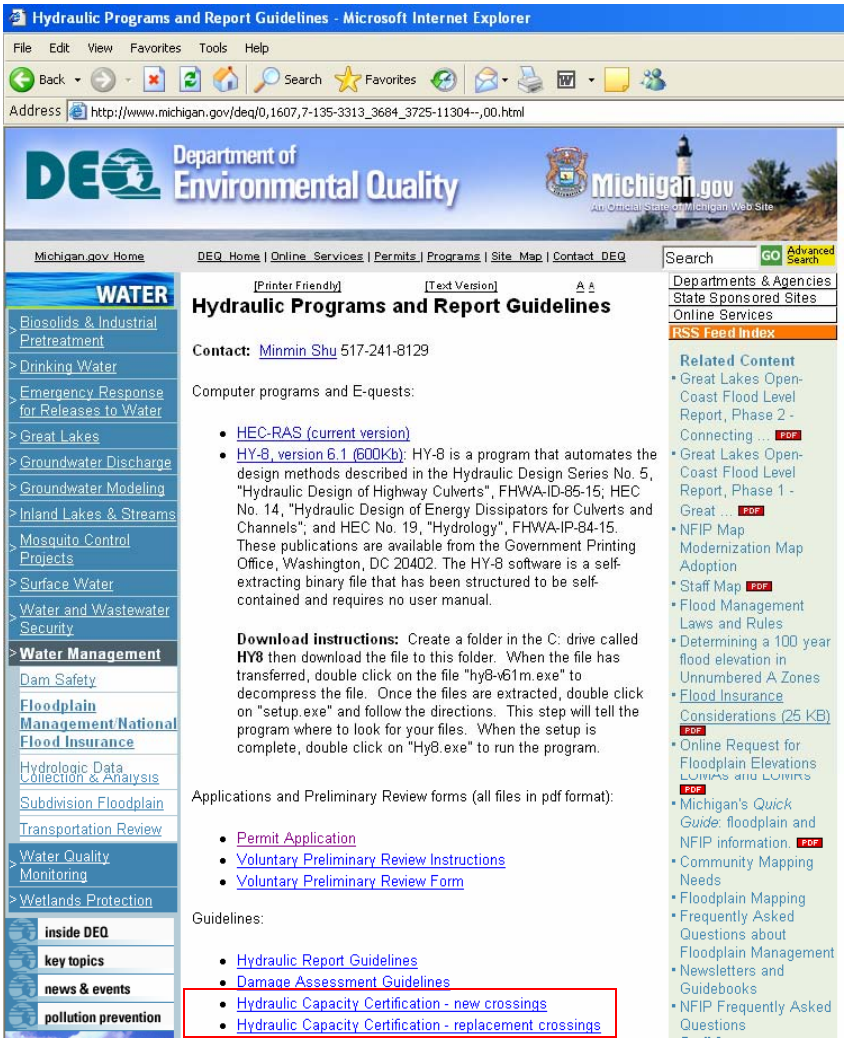
15 High water elevation – describe reference point and highest known water level above or below reference point and date of observation.

16

As much information as possible should be provided for existing and proposed bridges and/or culverts. Note that the same set of check boxes apply for both bridges and culverts. If the proposed project includes multiple bridges and/or culverts, fill out additional copies of this section of the application for each of the crossings (and identify the specific crossing the information pertains to) or provide all the requested information in a table and attach it to the application. See sample tables in Section 10A. Each crossing must be clearly cross referenced with the site plans and cross sections

Include “Required Certification Language” located on the MDEQ website when a Licensed Professional Engineer has “certified” that the project will not cause a “harmful interference” for a range of flood discharges up to and including the 100-year flood discharge. To find this language, go to www.michigan.gov/jointpermit select "Water Management (in Related Links)," "Floodplain Management / National Flood Insurance," "Hydraulic Programs and Report Guidelines," and then either select “Hydraulic capacity certifications – new crossings” or “Hydraulic capacity certifications – replacement crossings”.

A hydraulic report supporting this certification may be requested. If a hydraulic report has been completed for the project, provide a copy of this report and the associated computer disk with the permit application submittal. The web page referenced above also has information regarding hydraulic reports.


Hydraulic Programs and Report Guidelines - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://www.michigan.gov/deq/0,1607,7-135-3313_3684_3725-11304--,00.html
Department of Environmental Quality
Michigan.gov
An Official State of Michigan Web Site
Michigan.gov Home
DEQ Home | Online Services | Permits | Programs | Site Map | Contact DEQ
Search GO Advanced Search
WATER
Biosolids & Industrial Pretreatment
Drinking Water
Emergency Response for Releases to Water
Great Lakes
Groundwater Discharge
Groundwater Modeling
Inland Lakes & Streams
Mosquito Control Projects
Surface Water
Water and Wastewater Security
Water Management
Dam Safety
Floodplain Management/National Flood Insurance
Hydrologic Data Collection & Analysis
Subdivision Floodplain
Transportation Review
Water Quality Monitoring
Wetlands Protection
inside DEQ
key topics
news & events
pollution prevention
[Printer Friendly] [Text Version] A A
Hydraulic Programs and Report Guidelines
Contact: Minmin Shu 517-241-8129
Computer programs and E-quests:
HEC-RAS (current version)
HY-8, version 6.1 (600Kb): HY-8 is a program that automates the design methods described in the Hydraulic Design Series No. 5, "Hydraulic Design of Highway Culverts", FHWA-ID-85-15; HEC No. 14, "Hydraulic Design of Energy Dissipators for Culverts and Channels"; and HEC No. 19, "Hydrology", FHWA-IP-84-15. These publications are available from the Government Printing Office, Washington, DC 20402. The HY-8 software is a self-extracting binary file that has been structured to be self-contained and requires no user manual.
Download instructions: Create a folder in the C: drive called HY8 then download the file to this folder. When the file has transferred, double click on the file "hy8-v61m.exe" to decompress the file. Once the files are extracted, double click on "setup.exe" and follow the directions. This step will tell the program where to look for your files. When the setup is complete, double click on "Hy8.exe" to run the program.
Applications and Preliminary Review forms (all files in pdf format):
Permit Application
Voluntary Preliminary Review Instructions
Voluntary Preliminary Review Form
Guidelines:
Hydraulic Report Guidelines
Damage Assessment Guidelines
Hydraulic Capacity Certification - new crossings
Hydraulic Capacity Certification - replacement crossings
Departments & Agencies
State Sponsored Sites
Online Services
RSS Feed Index
Related Content
Great Lakes Open-Coast Flood Level Report, Phase 2 - Connecting ... PDF
Great Lakes Open-Coast Flood Level Report, Phase 1 - Great ... PDF
NFIP Map Modernization Map Adoption
Staff Map PDF
Flood Management Laws and Rules
Determining a 100 year flood elevation in Unnumbered A Zones
Flood Insurance Considerations (25 KB) PDF
Online Request for Floodplain Elevations LOMAs and LOMRs PDF
Michigan's Quick Guide: floodplain and NFIP information. PDF
Community Mapping Needs
Floodplain Mapping
Frequently Asked Questions about Floodplain Management
Newsletters and Guidebooks
NFIP Frequently Asked Questions

1. **Culvert type:** There are several styles (types) of culverts and construction materials. Specify the type (box, circular, arch, etc.) and material (corrugated metal, timber, concrete, etc.) for any existing and proposed culverts.

2. **Bridge span or Culvert:** The bridge span is the length perpendicular to the stream, and the length going across and beyond the stream. Insert the span for any existing and proposed bridge(s). For existing or proposed culvert specify the width (diameter) in feet.

3. **Bridge type:** Specify the type of bridge for the existing or proposed project (i.e. concrete box beam, timber, concrete I-beam, etc.)

4. **Bridge width or Culvert length:** For a bridge, specify the width (the dimension parallel to the stream flow). For culverts specify the culvert length in feet.

5. **Entrance Design:** Specify the entrance design type such as projecting, mitered, wingwalls, or other for the existing and/or proposed structures.

6. **Bridge rise or culvert rise:** For bridges, provide the bridge rise, which is the distance from bottom of beam to the streambed. For culverts, provide the rise, which is the distance from the top of culvert to the streambed.

7. **Total structure waterway opening:** Provide the total structure waterway opening above the streambed (in square feet) for the existing and/or proposed structure.

8. **Elevation of culvert crown/bottom of bridge beam:** For culverts, provide the elevation of the culvert crown upstream and downstream. For bridges, provide the elevation of the bottom of the bridge beam in feet upstream and downstream.

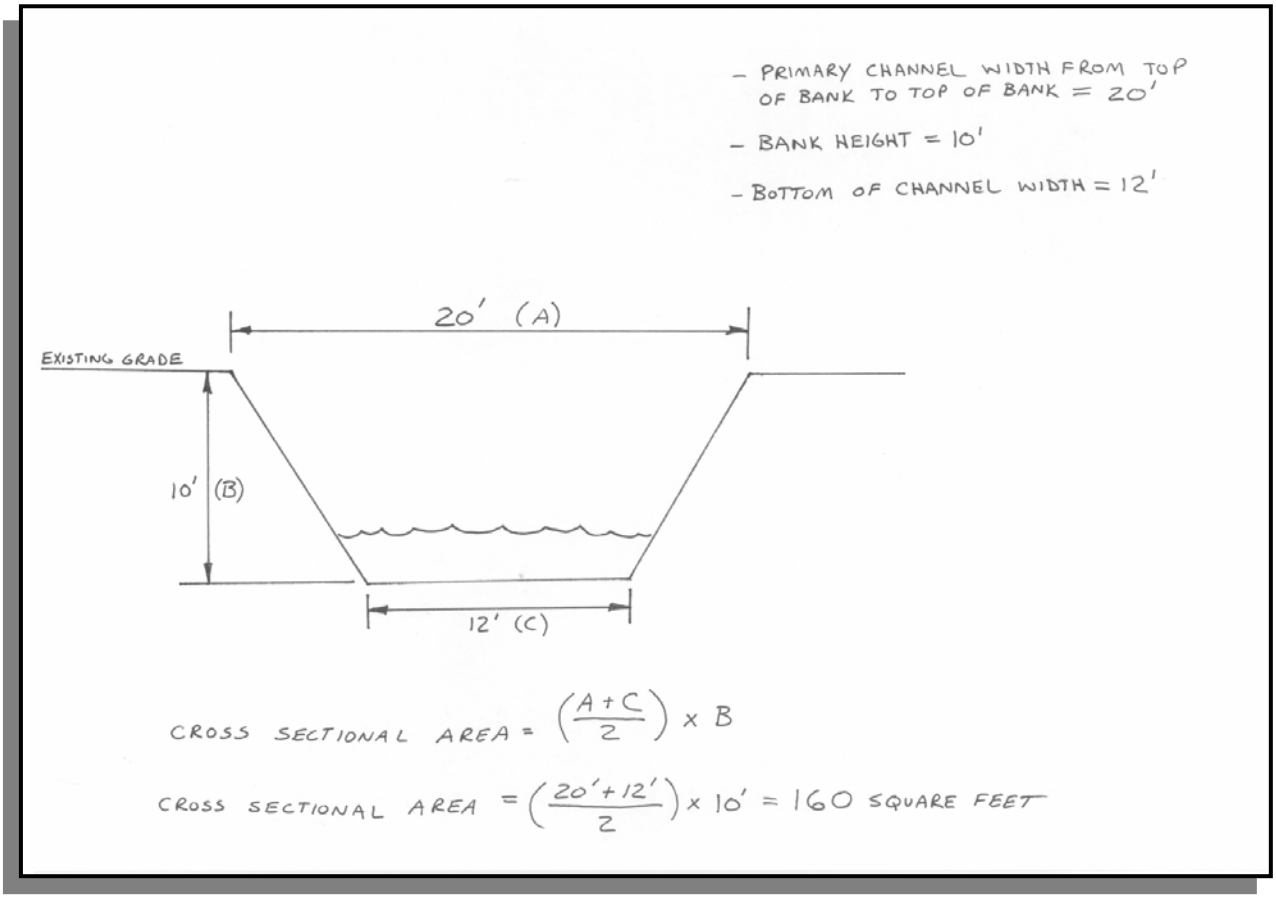
9. **Higher elevation of:** Provide either the culvert invert or the elevation of the streambed within the culvert in feet, whichever is highest, upstream and downstream for the existing and/or proposed culvert.

10. **Elevation of road grade at structure:** Provide the elevation of the road grade at the proposed structure in feet. If elevations are unknown specify the distance from the top of the culvert to the finished road grade, or the distance from the bottom beam of the bridge to the finished road grade.

11. **Distance from low point of road to mid-point of bridge crossing:** This information is also necessary for culvert crossings. Provide a distance in feet from the low point of the road to the mid-point of the bridge or culvert crossing segment.

12. Elevation of low point in road: Provide the elevation in feet of the low point in the road for the existing and/or proposed crossing segment.

13. Cross sectional area of primary channel: Provide the cross sectional area measurement of the primary channel in square feet at the existing and/or proposed crossing. See Sample Drawing 14C in Appendix B for a reference on calculating the cross sectional area.



Calculating the Cross Sectional Area

14. Average stream width at OHWM outside the influence of the structure: Specify the average width of the actual stream both upstream and downstream of the bridge or culvert and outside the influence of the structure. Typically this would be a distance of 50 to100 feet upstream and downstream of the bridge or culvert.

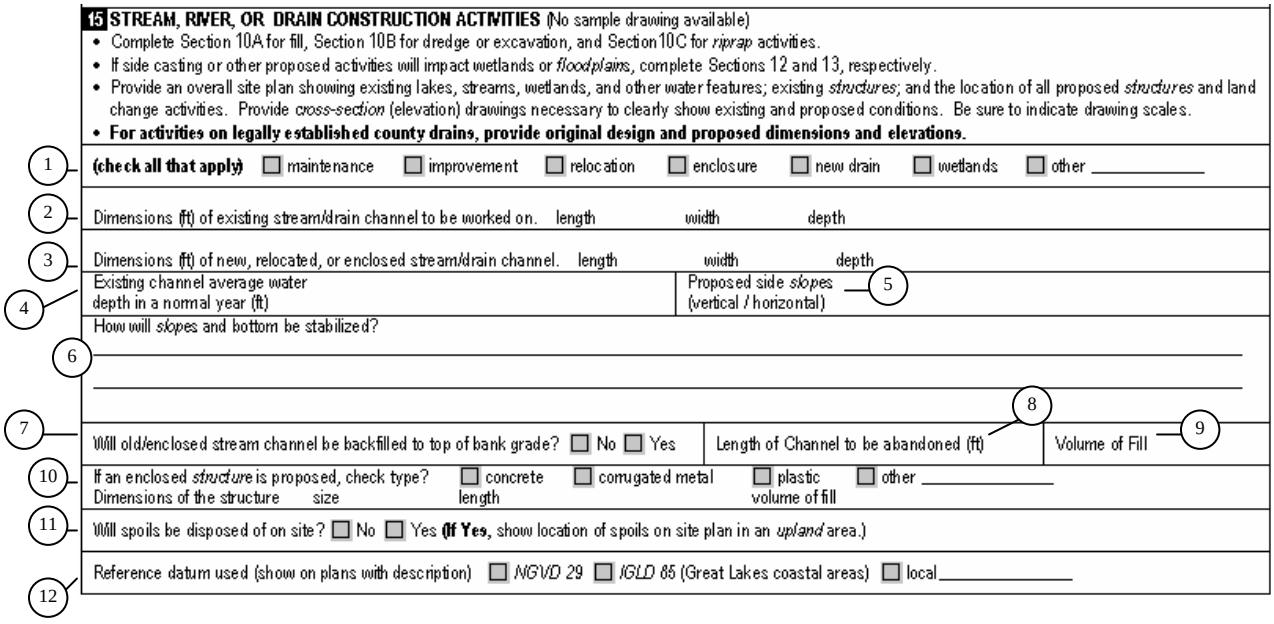
15. Reference datum used: The reference datum used should be shown on the plans along with a description. Specify the datum used for this project by checking the appropriate box. If an assumed elevation is used, show the bench mark location and its elevation on the plans.

16. **High water elevation:** Choose a reference point on the proposed project site and specify the highest know water level above or below the selected reference point and the date the observation (measurement) was taken. Provide a vertical distance from the reference point to the high water level. Clearly show the reference point location on the plans.

SECTION 15: Stream, River, or Drain Construction Activities

This section provides information for activities on streams, rivers, or drains (including relocations). Information provided here should be consistent with other sections of the application. If there will be any fill and/or cut associated with the proposed stream, river, and drain activities complete Sections 10A and/or 10B of the application. If riprap is proposed, complete Section 10C. If side casting (placement of excavated materials on the banks adjacent to a stream, river, or drain) of excavated material is proposed within a wetland or floodplain area, provide the detailed information for this proposed impact under Section 12 and/or Section 13.

If a proposed relocation includes a combination of new open drain channels and enclosures, be sure to specify the length of the proposed open channel and the length of the proposed enclosure. Some drain improvements require the realignment of the centerline of the drain. If the centerline of the drain changes this is considered "relocation". Therefore lengths of the existing drain and the proposed relocated drain need to be specified. If there are multiple areas of relocated, enclosed, and/or new drains, information specific to each area can be provided in a table. See sample tables in Section 10A.



15 STREAM, RIVER, OR DRAIN CONSTRUCTION ACTIVITIES (No sample drawing available)

- Complete Section 10A for fill, Section 10B for dredge or excavation, and Section 10C for *riprap* activities.
- If side casting or other proposed activities will impact wetlands or *floodplains*, complete Sections 12 and 13, respectively.
- Provide an overall site plan showing existing lakes, streams, wetlands, and other water features; existing *structures*; and the location of all proposed *structures* and land change activities. Provide *cross-section* (elevation) drawings necessary to clearly show existing and proposed conditions. Be sure to indicate drawing scales.
- **For activities on legally established county drains, provide original design and proposed dimensions and elevations.**

1 **(check all that apply)** ☐ maintenance ☐ improvement ☐ relocation ☐ enclosure ☐ new drain ☐ wetlands ☐ other _____

2 Dimensions (ft) of existing stream/drain channel to be worked on. length width depth

3 Dimensions (ft) of new, relocated, or enclosed stream/drain channel. length width depth

4 Existing channel average water depth in a normal year (ft)

5 Proposed side *slopes* (vertical / horizontal)

6 How will *slopes* and bottom be stabilized?

7 Will old/enclosed stream channel be backfilled to top of bank grade? ☐ No ☐ Yes

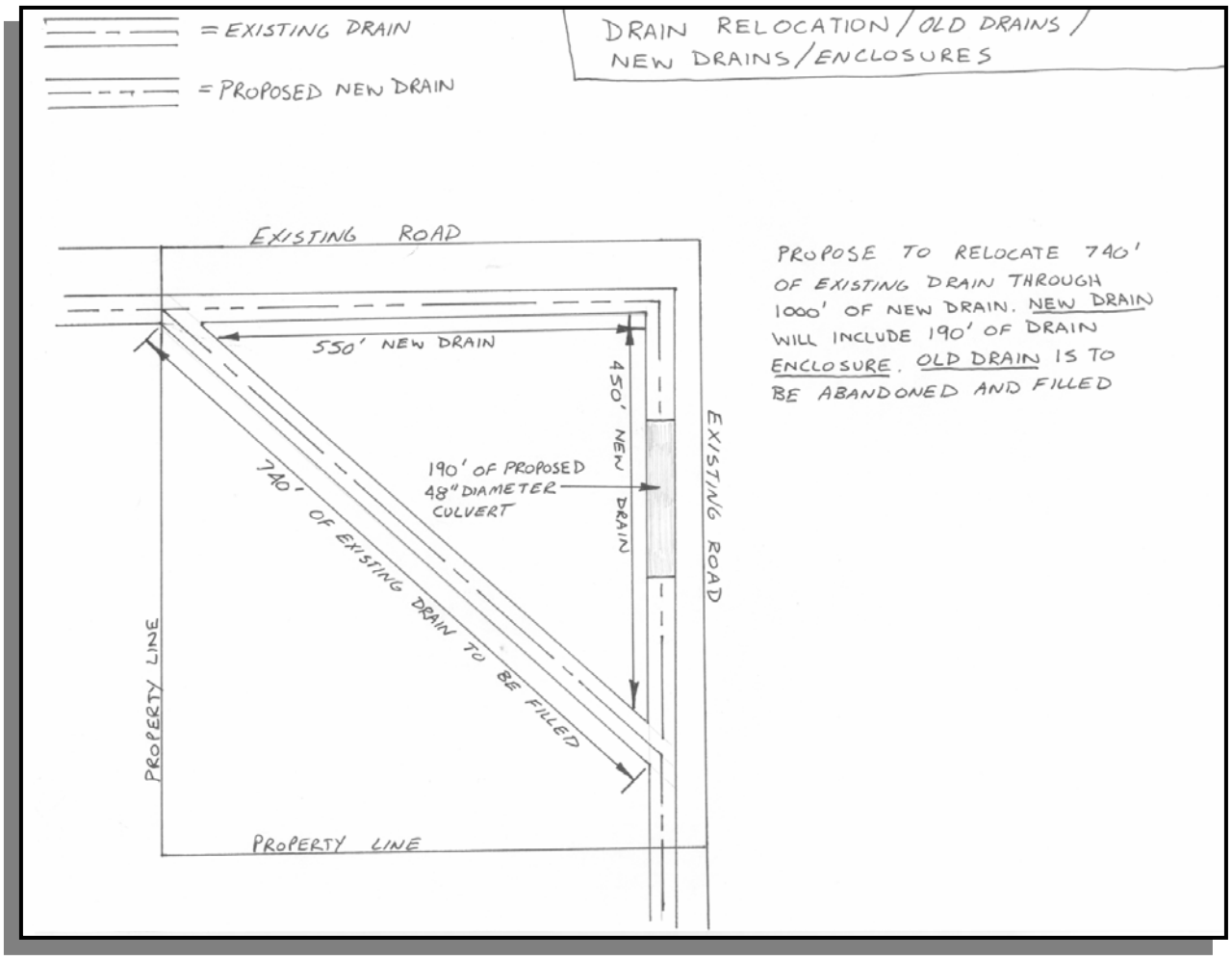
8 Length of Channel to be abandoned (ft)

9 Volume of Fill

10 If an enclosed *structure* is proposed, check type? ☐ concrete ☐ corrugated metal ☐ plastic ☐ other _____
Dimensions of the structure size length volume of fill

11 Will spoils be disposed of on site? ☐ No ☐ Yes **(If Yes,** show location of spoils on site plan in an *upland* area.)

12 Reference datum used (show on plans with description) ☐ *NGVD 29* ☐ *IGLD 85* (Great Lakes coastal areas) ☐ local _____



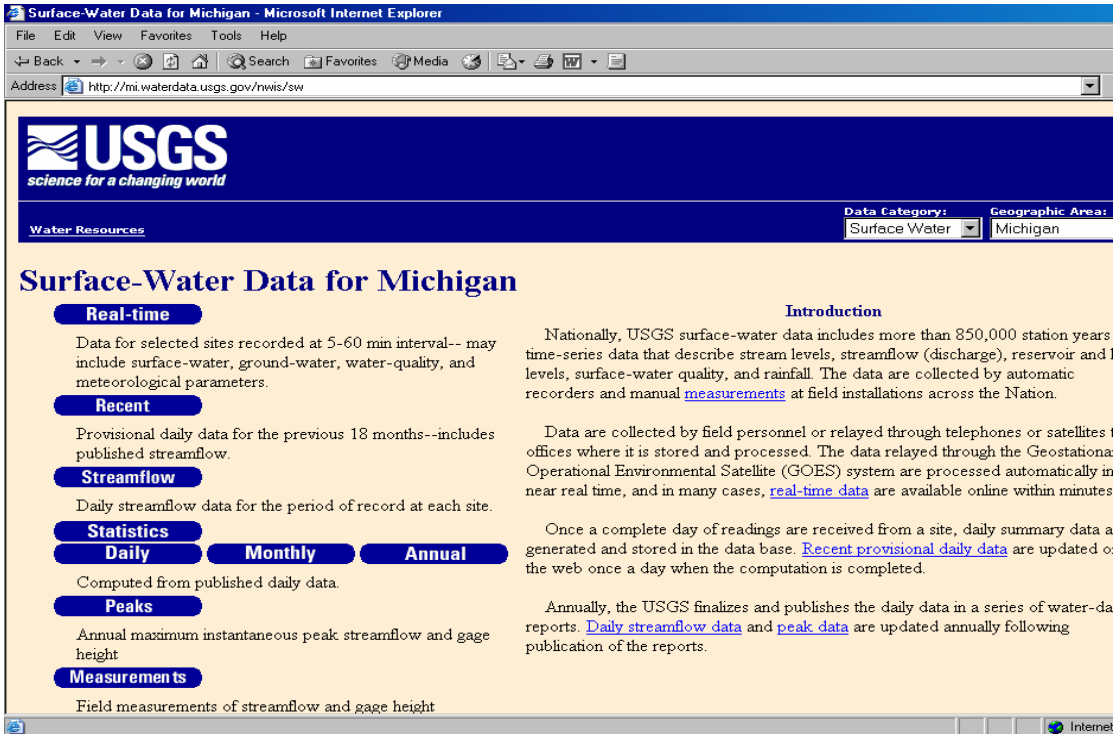
Drain Relocation Enclosure

1. **Check all that apply:** Various types of activities affect streams, rivers, and drains. Check all items that apply to the proposed project. If "other" is checked, provide a brief description of the proposed activity.

2. **Dimensions of the existing stream/drain channel to be worked on:** If more than one section of drain is proposed to be worked on, provide separate dimensions in feet for each section of drain and indicate the sections on the project site plan.

3. **Dimensions of new, relocated, or enclosed stream/drain channel:** Specify the dimensions in feet for a new, relocated, or enclosed stream/drain channel and specify the length, width, and depth in feet of the new, relocated, or enclosed stream/drain channel. If any bridges or culverts will be removed or replaced, complete Section 14 (and Section 10N if applicable) and indicate their location(s) on the project site plan. If multiple activities or locations are proposed, this should be indicated on the project drawings and the dimensions for each area provided in a table cross referenced to the drawings. Also include the volume of dredge or excavation in cubic yards.

4. **Existing channel average water depth in a normal year:** Specify the average water depth in feet in a normal year. This typically is not during a drought or rainy season. This information is available on the United States Geological Survey website at http://mi.waterdata.usgs.gov/nwis/sw.



❖ An additional source for water levels is the US National Oceanic and Atmospheric Administration's website, *http://glakesonline.nos.noaa.gov/ or http://www.co-ops.nos.noaa.gov/.*

5. **Proposed side slopes (vertical and horizontal):** Provide the side slopes for the existing, proposed, or relocated portion of the stream or drain channel. Identify the vertical extent before the horizontal extent of the slope

> **EXAMPLE:** A 2 foot vertical drop to a 1 foot horizontal run would be written as 2:1

6. **How will slopes and bottom be stabilized:** Specify what method will be used to stabilize the side slopes and bottom of channel for any proposed stream or drain construction areas. If riprap will be placed, complete Section 10D of the application.

7. **Will old/enclosed stream channel be backfilled to top of bank grade:** Specify if the old or enclosed stream channel will be backfilled to the top of bank grade by checking the appropriate box. Cross sectional drawings should be provided showing existing and proposed grades.

8. **Length of Channel to be abandoned:** If an existing stream or drain is proposed to be relocated or abandoned, specify the length in feet of the existing stream or drain to be abandoned due to the construction of the new stream/drain channel.

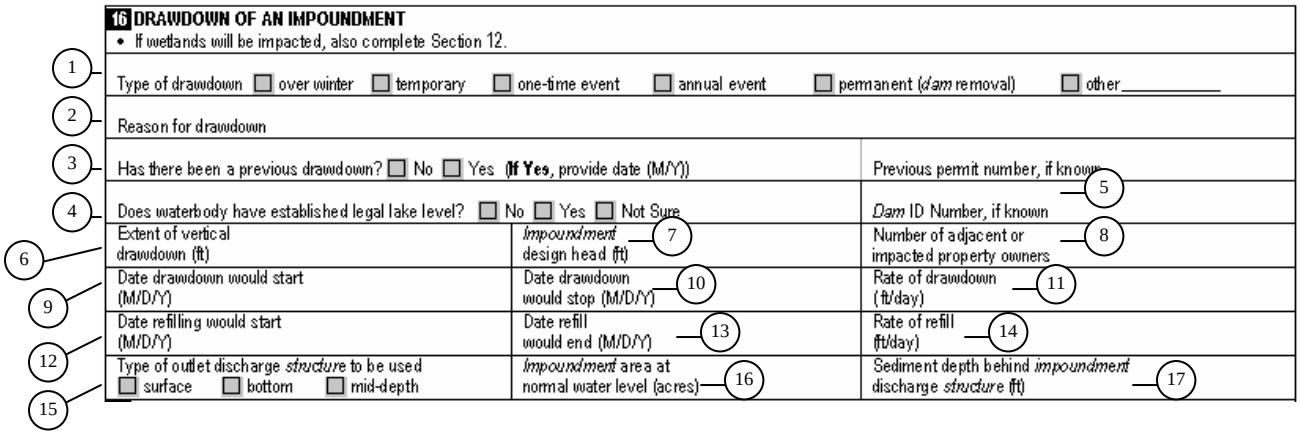
9. **Volume of fill:** This refers to the volume of fill necessary to fill the abandoned portion of the stream or drain channel. If the abandoned stream or drain channel is proposed to be filled, provide the volumes and the dimensions (length, width, and depth) for the proposed fill. If no fill is proposed within the abandoned channel, specify how the water will be diverted to the new stream or drain channel. If fill is proposed in the old stream or drain channel to create the diversion, provide this volume and specify that the fill will be used for diversion and that the rest of the abandoned stream or drain channel will be left unfilled. The diversion area should be clearly indicated on the plans and cross sections.

10. **If an enclosed structure is proposed, check type.** If an enclosure is proposed specify the type of structure material proposed by checking the appropriate box. If “other” is checked, provide a detailed description of what is proposed. Also provide the dimensions of the proposed structure by specifying the size (diameter in inches), the length of the proposed structure, and the volume of fill required for the structure installation. This information should be consistent with Section 10A.

11. **Will spoils be disposed of on site:** As in Section 10B, specify if spoils will be disposed of on site by checking the appropriate box “No” or “Yes”. If “Yes” is checked, specify on the site plan the location where these spoils will be placed and provide detailed dimensions of the spoils area(s). If spoils will be hauled off-site, provide a detailed vicinity map for the disposal site, specify on a site plan the location of where the spoils will be placed, and indicate distances between the disposal area(s) and the property boundaries.

12. **Reference datum used:** The reference datum used should be shown on the plans along with a description. Specify the datum used for this project by checking the appropriate box. If an assumed elevation is used, show the bench mark location and its elevation on the plans.

SECTION 16: Drawdown of an Impoundment



16 DRAWDOWN OF AN IMPOUNDMENT

- If wetlands will be impacted, also complete Section 12.

1. Type of drawdown ☐ over winter ☐ temporary ☐ one-time event ☐ annual event ☐ permanent (*dam* removal) ☐ other_____
2. Reason for drawdown
3. Has there been a previous drawdown? ☐ No ☐ Yes (**If Yes**, provide date (M/Y)) | Previous permit number, if known
4. Does waterbody have established legal lake level? ☐ No ☐ Yes ☐ Not Sure | 5 *Dam* ID Number, if known

6 Extent of vertical drawdown (ft)	7 *Impoundment* design head (ft)	8 Number of adjacent or impacted property owners
9 Date drawdown would start (M/D/Y)	10 Date drawdown would stop (M/D/Y)	11 Rate of drawdown (ft/day)
12 Date refilling would start (M/D/Y)	13 Date refill would end (M/D/Y)	14 Rate of refill (ft/day)
15 Type of outlet discharge *structure* to be used ☐ surface ☐ bottom ☐ mid-depth	16 *Impoundment* area at normal water level (acres)	17 Sediment depth behind *impoundment* discharge *structure* (ft)

This section reviews drawdowns of impoundments of any size. If the drawdown will temporarily or permanently drain wetlands, Section 12 of the application must also be completed. Provide an explanation of what methods or practices will be used to reduce downstream sedimentation that could be caused by the drawdown. Specify if sand traps, check dams, silt curtains, etc. will be used. Include information in the project narrative in Section 2 of the application.

1. **Type of drawdown:** Specify the proposed frequency of the drawdown by checking the box that best describes the project.

2. **Reason for drawdown:** Specify the reason (purpose) for the drawdown in a brief narrative format.

3. **Has there been a previous drawdown:** Check the appropriate box "No" or "Yes" depending on whether or not this activity has been done before. If "yes" is checked, provide the month and year the previous drawdown was completed. Also provide the MDEQ permit number for the previous drawdown (if known).

4. **Does the waterbody have established legal lake level:** An established legal lake level is typically a court mandated elevation for the lake. Specify if the waterbody that will be drawn down has an established lake level by checking "No," "Yes," or "Not Sure."

5. **Dam ID Number, if known:** This Dam Identification Number is the Michigan Dam Identification Number and not the FERC project number. Provide the Michigan Dam Identification number for the specific project.

6. **Extent of vertical drawdown:** Specify the vertical extent of the drawdown by providing a distance in feet that the impoundment will be lowered from its existing water level.

7. **Impoundment design head:** Specify the impoundment design head (depth in feet) for the dam. This is the difference in elevation measured vertically between the natural bed of the stream at the downstream embankment toe of the dam to the natural water elevation of the impoundment.

8. **Number of adjacent or impacted property owners:** Specify the number of property owners adjacent to the project or the number of property owners that will be impacted by the proposed drawdown. All the names and mailing addresses of the owners that will be impacted by the lower water levels caused by the drawdown (will have a decrease in water elevation on their property) are required to be listed. The names and mailing addresses of all impacted owners should be provided under Section 8 of the application or as an attachment to the application. If there is a lake board or association, provide the name and mailing address for the lake board or association and a copy of the minutes from the lake board or association meeting approving the drawdown. If necessary, the lake board or association may be able to provide a complete listing of property owners' names and mailing addresses.

9. **Date drawdown would start:** Specify the month, day, and year the proposed drawdown will begin. If the exact date is not known, provide an approximate start date. This information allows field staff to evaluate potential seasonal environmental impacts of the proposed drawdown.

10. **Date drawdown would stop:** Specify the month, day, and year that the drawdown process will end. If the exact date is not known for when the drawdown will stop, provide an approximate completion date for the drawdown process.

11. **Rate of drawdown:** The rate of drawdown is the rate the water depth in the impoundment will be lowered vertically and should be provided in feet per day.

12. **Date refilling would start:** Specify the month, day, and year that the refilling of the impoundment will begin. This is usually after other projects associated with the drawdown have been completed. Provide an approximate date for beginning the refilling. Optionally state: "the refilling of the impoundment will begin immediately after completion of repairs or modifications to the dam structure."

13. **Date refill would end:** Specify the month, day, and year the refilling of the impoundment will be completed. The refill of an impoundment may be based on contributing waters from tributaries or strictly on rainfall amounts, therefore, it is suggested that an estimate is provided when the refill would be complete.

14. **Rate of refill:** The rate of refill is the rate at which the water in the impoundment will be raised vertically, and should be provided in feet per day. Because this may be based on contributing waters from tributaries or rainfall, the rate can be estimated.

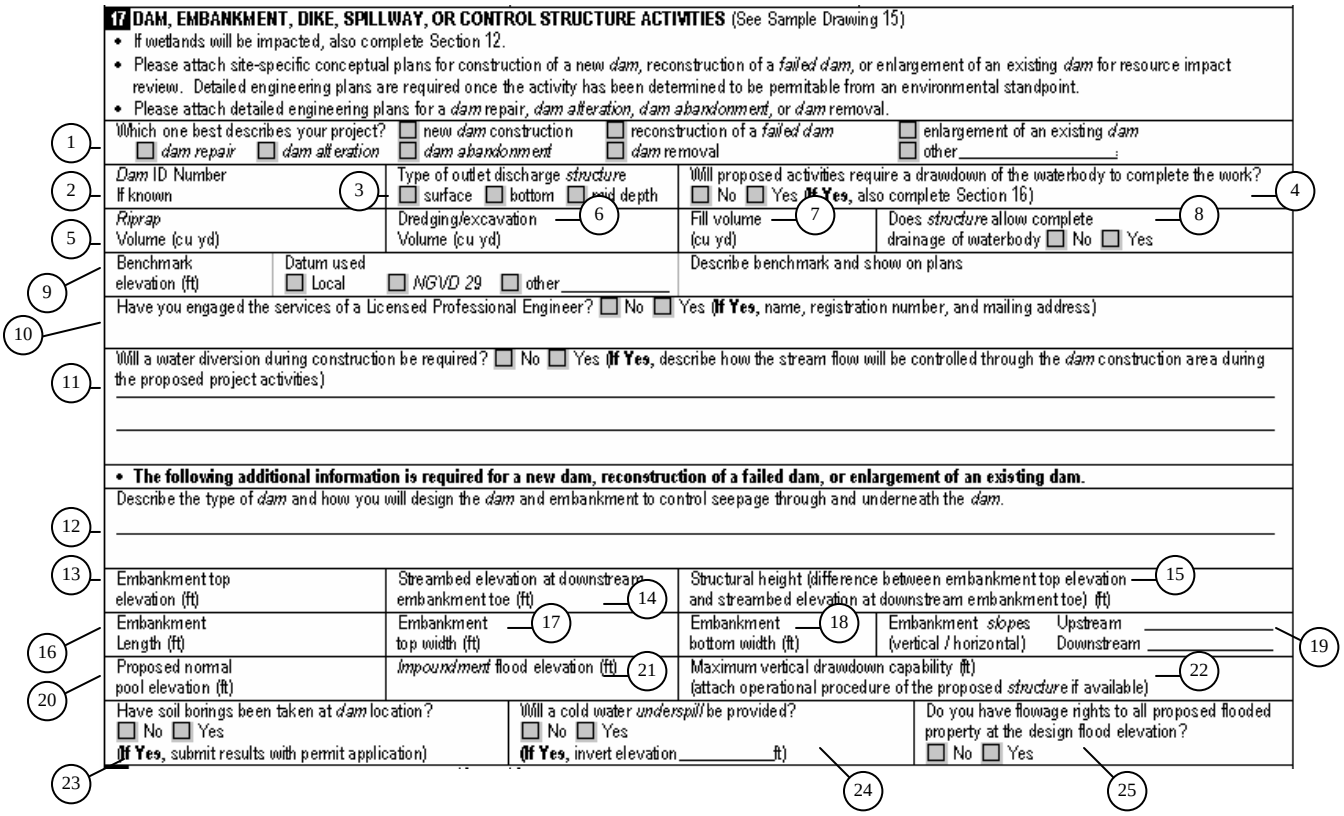
15. Type of outlet discharge structure to be used: Specify the discharge structure alignment that will be used for the drawdown of the impoundment by checking the box that best describes the structure to be used.

16. Impoundment area at normal water level: Specify the size in surface area of the impoundment at normal water levels or at a legally established water level. The size should be provided in acres, although this can also be provided in square feet.

17. Sediment depth behind the impoundment discharge structure: Specify the depth of sediment in feet behind the impoundment discharge structure. Sediment depth is the thickness of material that has accumulated behind the discharge structure due to silt build-up. The depth of this sediment is the difference in feet from the top of the current impoundment sediment bottom directly behind the discharge structure down to the bottom of the original impoundment. In Section 2, provide information on the exact location of area the sediment will be disposed and show this on a site plan.

SECTION 17: Dam, Embankment, Dike, Spillway, or Control Structure Activities

This section covers projects that involve or are associated with dams, embankments, dikes, spillways, or control structures. Information provided in this section should be consistent with information provided in other sections of the application, such as Sections 10A, 10B, and 10C.



Site specific conceptual plans are required for the construction of a new dam, reconstruction of a failed dam, or enlargement of an existing dam for resource impact review. These plans must show enough detail and provide enough information to determine the proper filing fee and the amount of resource impact proposed. Detailed engineering plans for these types of projects are only required once the activity has been determined to not have an environmental impact and are eligible for a permit. For activities such as dam repair, dam alteration, dam abandonment and dam removal, detailed engineering plans must be attached to the application submittal. These drawings are required to determine the possible environmental impact of the activity, if permitted.

1. **Which one best describes your project:** There are various types of dam projects that fall under the Section 17 category. Specify which one of the descriptions best describes the proposed project by checking the appropriate box(es).

2. **Dam ID Number:** The Dam Identification Number is the Michigan Dam Identification Number and not the FERC project number. Do **not** put the FERC project number in this area. If there is a Michigan Dam Identification Number associated with the project, provide it if it is known. If the Michigan Dam Identification Number is not known, write “not known”

in this area; if there is not a Michigan Dam Identification Number, write “does not exist” in this area.

3. **Type of outlet discharge structure:** Specify the type (alignment) of the discharge structure that exists or is proposed by checking the appropriate box.

4. **Will proposed activities require a drawdown of the waterbody to complete the work:** Specify if a drawdown is necessary for construction or completion of the proposed activities by checking “No” or “Yes”. If “Yes” is checked, complete Section 16 of the application.

5. **Riprap volume:** Specify the volume, in cubic yards, of riprap associated with the dam, embankment, dike, spillway, or control structure portions of the project.

6. **Dredging/excavation volume:** Specify the volume, in cubic yards, of any dredging and/or excavation associated with the dam, embankment, dike, spillway, or control structure portions of the project.

7. **Fill Volume:** Specify the volume, in cubic yards, of fill, other than riprap, associated with the dam, embankment, dike, spillway, or control structure portions of the project.

8. **Does structure allow complete drainage of water body:** Specify if the existing or proposed discharge structure allows for a complete drainage (drawdown) of the waterbody by checking “No” or “Yes”.

9. **Benchmark elevation:** Specify the elevation, in feet, of the benchmark that was used for the proposed project and specify the datum that was used by checking the appropriate box. If “other” is checked, specify what was used (such as an assumed elevation). Describe the bench mark and clearly show it on the plans.

Examples of Benchmarks:

- Nail in telephone pole, two feet up from ground
- Notch in southeast corner of seawall

10. **Have you engaged the services of a Licensed Professional Engineer:** Specify if an engineer has been hired by checking “No” or “Yes”. If “Yes” is checked, specify his or her name, his or her registration number, and mailing address.

11. **Will a water diversion during construction be required:** Specify if some type of structure will be used to divert water in another direction or to another area during the proposed construction activities by checking the appropriate box “No” or “Yes”. If a diversion will be used, describe how the stream flow will be controlled through the dam construction area during the proposed project activities. Also specify the type of diversion structure to be used such as sand bags, sheet piling, etc.

The following information is required for a new dam, reconstruction of a failed dam, or enlargement of an existing dam.

12. **Describe the type of dam and how you will design the dam and embankment to control seepage through and underneath the dam:** Provide a summary of the type of dam that is proposed and what types of designs or methods will be used to control seepage. (Examples include soil types, and liners, etc.)

13. **Embankment top elevation:** Specify the elevation in feet for the top of the existing and/or proposed embankment.

14. **Streambed elevation at downstream embankment toe:** Specify the elevation in feet of the stream bed at the outlet at the downstream embankment toe.

15. **Structural height:** Specify the structural height of the existing and/or proposed structure. The structure height is the difference between the embankment top elevation and streambed elevation at the downstream embankment toe. Also provide the dam height. The dam height is the difference in elevation between the lesser of the low spot on the embankment crest, such as a spillway, or the design flood elevation and the streambed at the outlet.

16. **Embankment length:** Specify the length of the existing/proposed embankments.

17. **Embankment top width:** Specify the width in feet of the top of the embankment .

18. **Embankment bottom width:** Specify the bottom base width in feet of the embankment.

19. **Embankment slopes:** Provide the slopes of the upstream embankment and the downstream embankment.

20. **Proposed normal pool elevation:** Specify the normal pool elevation (water level/impoundment) for the proposed impoundment in feet. This is usually set at the same elevation at which the discharge structure (stop logs, pipe invert, etc.) for the impoundment.

21. Impoundment flood elevation: Specify the impoundment flood elevation in feet. The impoundment flood elevation is the "design flood elevation," which is the maximum flood elevation that is considered in the design of the spillway capacity and freeboard for a dam.

22. Maximum vertical drawdown capability: Specify the maximum vertical extent to which the proposed structure is capable of lowering the impoundment in feet. If available, attach a copy of the operation procedure for the proposed structure.

23. Have soil borings been taken at dam location: Specify whether or not soil borings have been taken at the dam by checking "No" or "Yes". If soil borings have been taken, provide a copy of the boring results with the permit application submittal.

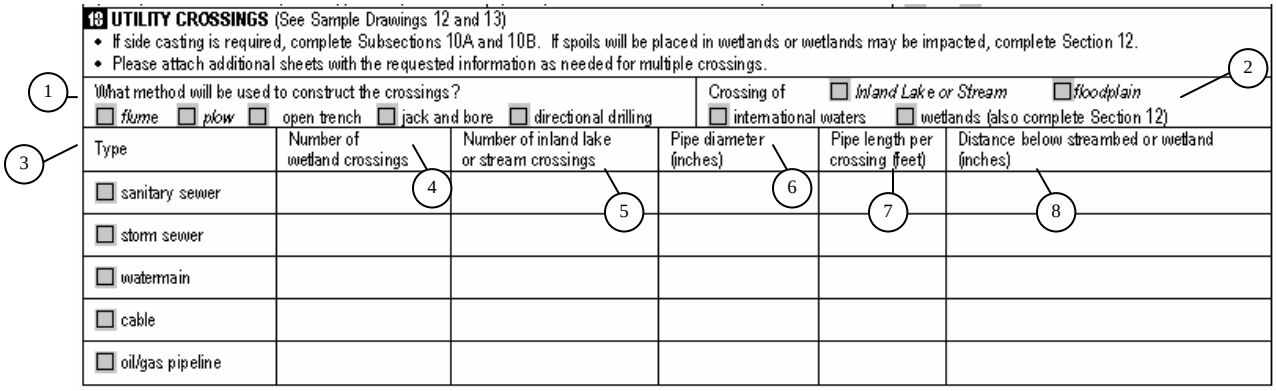
24. Will cold water underspill be provided: Specify whether or not a cold water underspill (cold water/bottom draw) will be used by checking "No" or "Yes". If a cold water underspill will be used, provide the invert elevation of the structure.

Water at the bottom of an impoundment usually has a cooler water temperature than water at higher elevations in the impoundment. There can be an ecologically significant temperature gradient depending on the depth of the impoundment.

25. Do you have flowage rights to all proposed flooded property at the design flood elevation: Specify whether or not the project is covered by flowage rights by checking "No" or "Yes". If there are flowage rights, provide a copy of the documents that pertain to this. If there aren't flowage rights, provide letters of authorization and names and mailing addresses for all property owners that will be impacted by the creation of the impoundment. For example, those that will have water impounded on their property due to the project.

SECTION 18: Utility Crossings

Utilities include sewer and water lines; electric transmission and telephone poles and lines (cables); and oil and/or gas pipelines. If multiple crossings are required for each type of utility, provide all information (including the method of installation) separately for each of the crossings and label the crossings as 1, 2 3, and so on. Information on multiple crossings should be provided on additional copies of Section 18 of the application and clearly indicate the crossing identifier that the information relates to. The crossing identifier (e.g. identification numbers) should be clearly cross referenced on all plans.



18 UTILITY CROSSINGS (See Sample Drawings 12 and 13)

- If side casting is required, complete Subsections 10A and 10B. If spoils will be placed in wetlands or wetlands may be impacted, complete Section 12.
- Please attach additional sheets with the requested information as needed for multiple crossings.

1 — What method will be used to construct the crossings?
☐ *flume* ☐ *plow* ☐ open trench ☐ jack and bore ☐ directional drilling

2 — Crossing of ☐ *Inland Lake or Stream* ☐ *floodplain* ☐ international waters ☐ wetlands (also complete Section 12)

3 — Type

Type	Number of wetland crossings (4)	Number of inland lake or stream crossings (5)	Pipe diameter (inches) (6)	Pipe length per crossing (feet) (7)	Distance below streambed or wetland (inches) (8)
☐ sanitary sewer					
☐ storm sewer					
☐ watermain					
☐ cable					
☐ oil/gas pipeline					

1. **What method will be used to construct the crossing:** There are several different crossing methods that can be used for utilities. Specify what method(s) are proposed for the project by checking the appropriate box(es).

2. **Crossing of:** Specify the regulated area the proposed utility will be crossing by checking the appropriate box(es) that apply to the proposed project.

3. **Type:** Indicate the types proposed for installation by checking the appropriate box(es).

4. **Number of wetland crossings:** Enter the number of wetland crossings that are proposed for each of the utility types. Clearly label each crossing on the corresponding diagrams.

5. **Number of inland lake or stream crossings:** Enter the number of inland lake or stream crossings proposed for each of the utility types. Clearly label each crossing on the corresponding diagrams.

6. **Pipe diameter:** Specify the diameter of pipe that will be used for each of the utilities. A diameter should be provided for each wetland and/or stream crossing. If a casing is proposed, also specify the pipe casing outside diameter. If a casing is proposed for a utility crossing, label the pipe diameter as “pipe” and the casing diameter as “casing” and

provide their outside diameters sizes in inches within this field. This information may be utilized to determine the appropriate application fee for the proposed project.

7. **Pipe length per crossing:** Specify the length in feet of crossings for each of the utilities and for each wetland crossing and for each inland lake or stream crossing. The length per crossing for wetlands is the linear feet of wetland to be crossed. The length per crossing for inland lakes is the linear feet of lake to be crossed. The length per crossing for streams should be the width of the streams (from bank to bank) to be crossed.

8. **Distance below streambed or wetland:** Specify the vertical distance in inches below the stream bed and/or wetland the utility will be placed. For lakes or streams, the distance should be taken from the bottom of the stream or lake to the top of the proposed pipe and/or casing. For wetlands, the distance should be taken from the top of the proposed pipe and/or casing to the existing ground surface in the wetland.

❖ **Also provide the trench width in feet for each utility to be placed.**

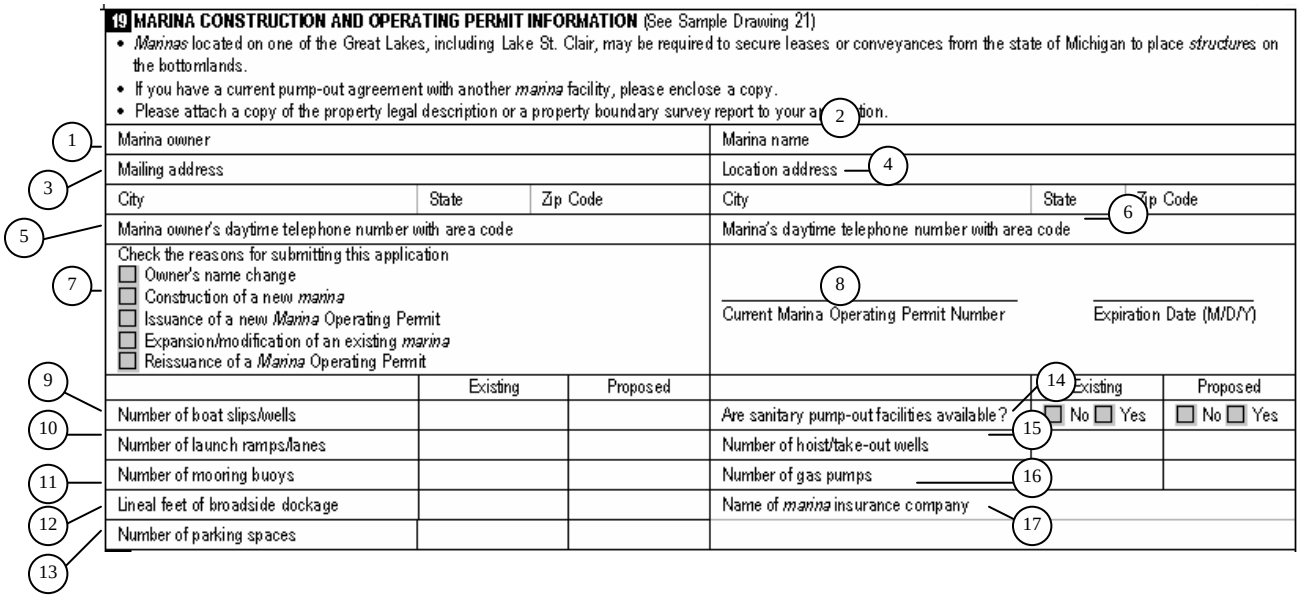
For utility projects that will require multiple stream and/or wetland crossings, the following table format should be used in addition to the table provided in the application.

Crossing number	Sheet number	Station boundary	Utility type	Crossing type	Length of wetland crossing	Width, top of bank to top of bank of stream crossing	Bank height	Bottom channel width	Water depth	Method of installation	Distance under streambed and/or wetland	Pipe size O.D.	Casing size O.D.
1	10	2+00 to 5+00	WW	Wetland	300’	15’	4’	10’	2’	Directional bore	36”	16”	20”
2	11	5+75	SS	Stream	n/a	10’	3’	4’	1’	Open cut	30”	12”	N/A
3	19	10+25 to 13+30	G	Wetland, stream	305’	4’	1’	2’	6”	Directional bore	36”	24”	N/A

SECTION 19: Marina Construction and Operating Permit Information.

Section 19 is applicable to proposed construction activities that may be related to a marina, regardless of location of the marina. Projects that include multiple docks, piers, boat wells, dredging areas, etc. should be described here as well as in Sections 10E through 10H. Sections 10A through 10C should also be completed if fill, dredging, and/or riprap are proposed.

A Marina Operating Permit (MOP) is required on privately or publicly owned commercial and non-commercial properties that meet the definition of a marina. A marina is defined as a site where structures extend into or over an inland lake, river, or other water body and the site offers service to the public or to members for boat dockage, moorage, loading, launching and other servicing of water craft. Non-commercial properties may include state, county, township or city parks, condominiums, clubs, out-lots or common lots shared by a home owner or lake owner association, restaurants, and, sometimes on private residential properties, where structures extend into and over the water and serve watercraft(s) not owned by the land owner. A construction permit is required on both seasonal and permanent structures at sites that meet the definition of a marina.



This section must be completed if the structure extends over water and provides services to watercraft and others, regardless of the project's location and whether or not a marina operating permit (MOP) is required. Marina construction on inland waters requires a Marina Operating Permit, pursuant to Part 301(Inland Lakes and Streams) of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended. Marinas on the Great Lakes, subject to Part 325 (Great Lakes Submerged Lands) of NREPA, do not need a MOP; however, an MDEQ conveyance (lease, deed, or use agreement) may be required for the proposed activity. See Chapter 3 for more information on marinas and conveyances.

1. Marina owner: Provide the name of the person(s) and/or company or organization that owns the marina facility. If a condominium association is the legal owner, provide the name of the association and contact person.

2. Marina name: Provide the name of the marina where any proposed activities will take place. If both a legal and common name are used, provide both names.

3. Mailing address: Provide the complete mailing address, including street number and address or Post Office Box number and city, state and zip code, for the marina owner.

4. Location address: Provide the actual street address for the marina facility.

5. Marina owner's daytime telephone number with area code: Provide the marina owner's phone or cell number where he or she can be reached Monday through Friday between 8:00 am and 5:00 pm. The MDEQ may need to contact the owner if there are any questions regarding the application or facility.

6. Marina's daytime telephone number with area code: Provide the marina's daytime phone number or number where a representative can be reached Monday through Friday between 8:00 am and 5:00 pm. The MDEQ may need to contact the facility if there are any questions regarding the application or facility.

7. Check the reasons for submitting this application: Identify the reason for applying for a permit by checking the appropriate box(es) that apply. If "other," include the reason in the adjacent available space in this box. A MOP may be required if multiple vessels are serviced by dockage, etc. This may include non-commercial properties such as a common lot owned by a Lake or Home Association.

8. Current Marina Operating Permit: If there is currently a MDEQ Marina Operating Permit Number for the site, provide the number and the expiration date.

For items 9 through 13 quantities, always identify the total existing and total proposed number of slips, wells, launches, buoys, etc. as requested in this part of the application. The quantities requested should be totals for the site.

EXAMPLE: An existing marina has 4 boat slips and the applicant will be adding 2 additional slips. The quantity to be entered under the "Proposed" column would be 6.

Although not requested in the application, specify the total number of boats that are able to moor or dock at the *existing* facility and the total number of boats that will be able to moor or dock at the *proposed* facility. This information is necessary to determine the proper filing fee for the project. Include the number of boats that the marina will be providing broadside dockage for.

9. **Number of boat slips/wells:** Specify the number of boat slips and wells that currently exist and the number of boat slips and wells proposed for the site. On the project site plan, label slip ID numbers (i.e. slip #1, slip #2, slip #3, etc.).

10. **Number of launch ramps/lanes:** Specify the number of launch ramps and the number of lanes per ramp that currently exist. Also specify the total number of launch ramps and the total number of lanes that are proposed.

11. **Number of mooring buoys:** Specify the total number of mooring buoys that currently exist and the total number of mooring buoys that are proposed.

12. **Lineal feet of broadside dockage:** Specify the total linear feet of existing broadside dockage and the total linear feet of proposed broadside dockage. Indicate this area on the project site plan. Also include the number of boats that the marina will provide broadside dockage for.

13. **Number of parking spaces:** Specify the total number of existing vehicle parking spaces at the facility and the total number of proposed vehicle parking spaces at the facility.

14. **Are sanitary pump-out facilities available:** Specify if pump-out facilities are available at the existing marina by checking “No” or “Yes”. Specify if pump-out facilities are available at the proposed marina or are to be constructed after marina modifications by checking “No” or “Yes.”

15. **Number of hoist and take-out wells:** Specify the total number of hoists and take-out wells at the existing facility and the total number of hoists and take-out wells at the proposed facility.

16. **Number of gas pumps:** Specify the number of gas pumps at the existing facility and the total number of gas pumps for the proposed facility.

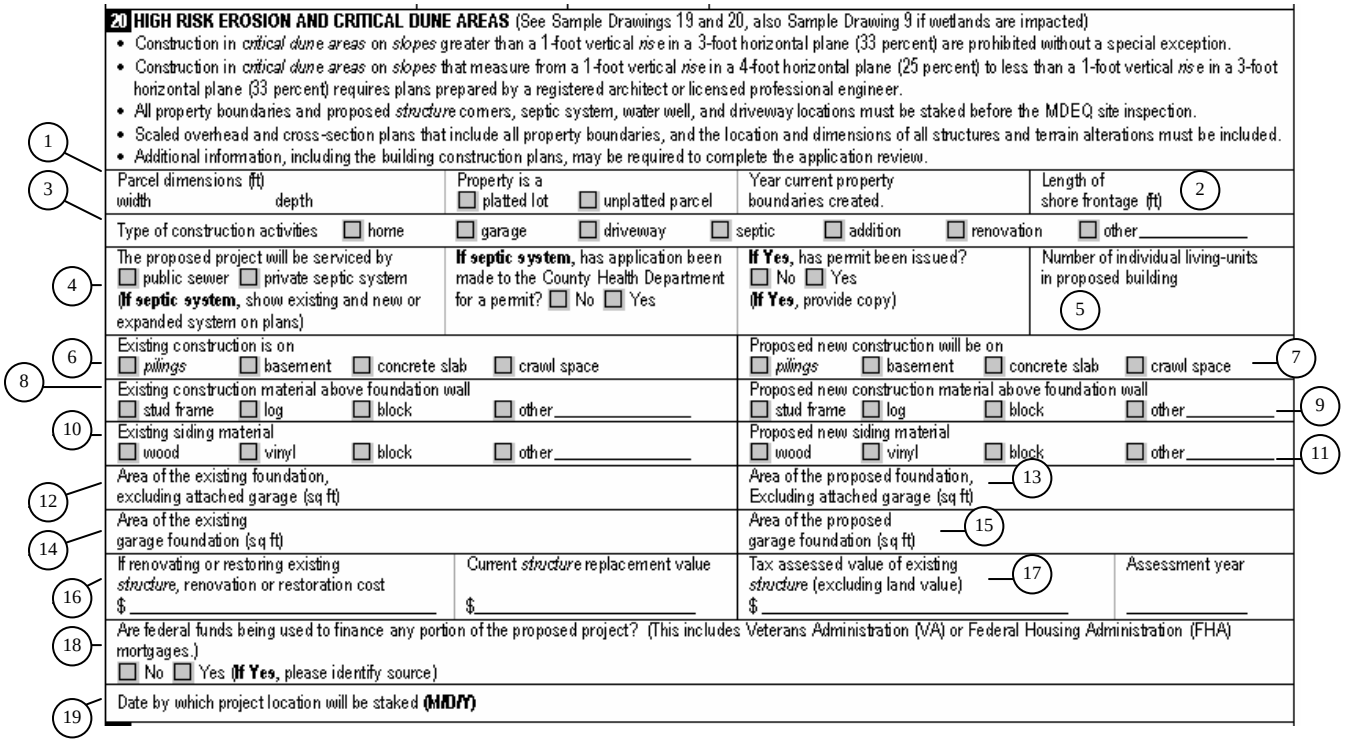
17. **Name of marina insurance company:** Provide the name of the insurance company the marina is covered under.

Note: When designing a marina, remember that all egress, ingress, and structures must remain within the marinas riparian interest area. New marina construction applications must include a legal survey and legal property description.

If maintenance is proposed, and is not “in place and in kind”, the application should clearly describe the maintenance and provide detailed drawings of the existing and proposed structures. This may include enlarging an existing structure without increasing the number of slips or downsizing a facility through a decrease in the number of slips. The existing permitted

facility and the proposed facility should be clearly illustrated in diagrams attached to the application. Also be sure to note if any dredging, fill, or shore maintenance activities are proposed and complete the appropriate corresponding sections of the application, such as Sections 10A and 10B.

SECTION 20: High Risk Erosion and Critical Dune Areas



20 HIGH RISK EROSION AND CRITICAL DUNE AREAS (See Sample Drawings 19 and 20, also Sample Drawing 9 if wetlands are impacted)

- Construction in *critical dune areas* on *slopes* greater than a 1-foot vertical *rise* in a 3-foot horizontal plane (33 percent) are prohibited without a special exception.
- Construction in *critical dune areas* on *slopes* that measure from a 1-foot vertical *rise* in a 4-foot horizontal plane (25 percent) to less than a 1-foot vertical *rise* in a 3-foot horizontal plane (33 percent) requires plans prepared by a registered architect or licensed professional engineer.
- All property boundaries and proposed *structure* corners, septic system, water well, and driveway locations must be staked before the MDEQ site inspection.
- Scaled overhead and cross-section plans that include all property boundaries, and the location and dimensions of all structures and terrain alterations must be included.
- Additional information, including the building construction plans, may be required to complete the application review.

(1) (3) Parcel dimensions (ft) width depth	Property is a ☐ platted lot ☐ unplatted parcel	Year current property boundaries created.	Length of shore frontage (ft) (2)
Type of construction activities ☐ home	☐ garage ☐ driveway ☐ septic ☐ addition ☐ renovation ☐ other_____		
(4) The proposed project will be serviced by ☐ public sewer ☐ private septic system **(If septic system,** show existing and new or expanded system on plans)	**If septic system,** has application been made to the County Health Department for a permit? ☐ No ☐ Yes	**If Yes,** has permit been issued? ☐ No ☐ Yes **(If Yes,** provide copy)	Number of individual living-units in proposed building (5)
(6) Existing construction is on ☐ *pilings* ☐ basement ☐ concrete slab ☐ crawl space		Proposed new construction will be on ☐ *pilings* ☐ basement ☐ concrete slab ☐ crawl space (7)	
(8) Existing construction material above foundation wall ☐ stud frame ☐ log ☐ block ☐ other_____		Proposed new construction material above foundation wall ☐ stud frame ☐ log ☐ block ☐ other_____ (9)	
(10) Existing siding material ☐ wood ☐ vinyl ☐ block ☐ other_____		Proposed new siding material ☐ wood ☐ vinyl ☐ block ☐ other_____ (11)	
(12) Area of the existing foundation, excluding attached garage (sq ft)		Area of the proposed foundation, Excluding attached garage (sq ft) (13)	
(14) Area of the existing garage foundation (sq ft)		Area of the proposed garage foundation (sq ft) (15)	
(16) If renovating or restoring existing *structure*, renovation or restoration cost $_____	Current *structure* replacement value $_____	Tax assessed value of existing *structure* (excluding land value) (17) $_____	Assessment year _____
(18) Are federal funds being used to finance any portion of the proposed project? (This includes Veterans Administration (VA) or Federal Housing Administration (FHA) mortgages.) ☐ No ☐ Yes **(If Yes,** please identify source)			
(19) Date by which project location will be staked **(MM/Y)**			

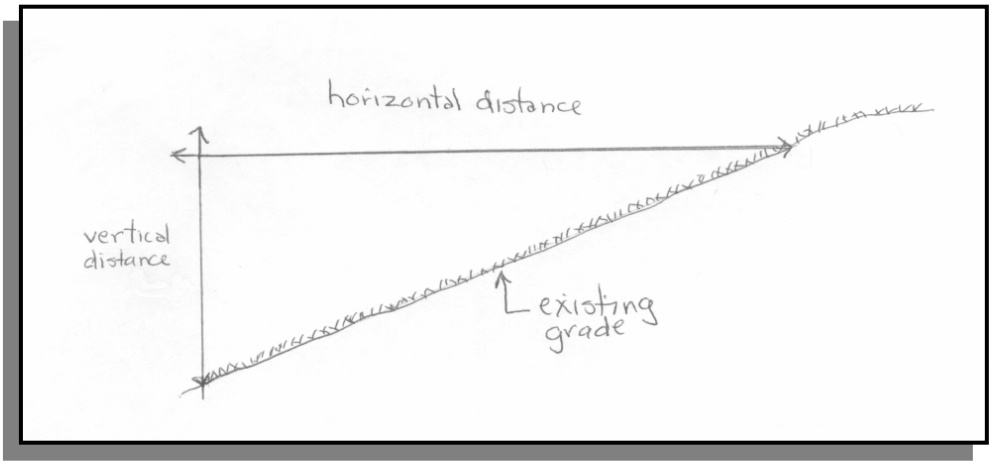
Section 20 should be completed for all projects that may impact a Designated Critical Dune Area (CDA), Part 353 of NREPA, or Designated High Risk Erosion Area (HREA), Part 323 of NREPA. Most applications for impacts within Part 323 and 353 are for new buildings or additions to buildings; however, this section also applies to other activities such as landscaping (excavation, re-grading, and fill placement), decks, sand removal, stairways, tree cutting, and work on septic systems within CDAs and HREAs.

Scaled overhead and cross-section plans that include all property boundaries, and the location and dimensions of all structures and terrain alterations must be included with the application. Additional information, including the building construction plans, may be required to complete the application review.

If the proposed project will involve construction in a CDA with slopes greater than 1-foot vertical rise in a 3-foot horizontal plane (33%) a special exception may be required. MDEQ field staff will provide the special exception application, if it is required.

If the proposed project will involve construction in a CDA with slopes from 25% to less than 33%, plans must be prepared by a registered architect or licensed professional engineer or registered landscape architect.

Be sure the property tax identification number is provided in Section 1 of the application. This information enables MDEQ staff to determine if the proposed activity is in a designated High Risk Erosion or Critical Dune area.



Horizontal and Vertical Lines Labeled

1. **Parcel dimensions:** Specify the parcel dimensions by providing the width and depth of the parcel where the proposed project is taking place. Specify if the property is a "platted lot" or an "unplatted parcel" by checking the appropriate box. Indicate the year the current property boundaries were created. This information can usually be found on a boundary or lot survey of the property. It may be helpful to include a copy of the survey with the application.

2. **Date by which project location will be staked:** On applications printed after 12/2005, provide the **date the project was staked** in this box. Provide the proposed day, month and year when the project was staked. Staking should show the extent of all work on the project, and include dimensions for proposed work on houses, additions, decks, driveways, septic areas, and landscaped areas. Trees larger than 3 inches in diameter at breast height that are proposed to be cut or removed should also be clearly marked. MDEQ field personnel will not visit a site if the activity areas are not staked or otherwise marked. All property boundaries and proposed structure corners, septic system, water well, and driveway locations must be staked before the MDEQ site inspection.

3. **Type of construction activities:** A permit is needed for various types of activities on dunes, as listed. Specify the types of construction activities that are proposed for the site by checking the appropriate box(es). If "other" is checked, provide a detailed description of the proposed activity.

4. **The proposed project will be serviced by:** Specify if the project will be serviced by a "public sewer" or a "private septic system" by checking the appropriate box. If "septic system" is checked, show the existing or expanded system or the proposed new system on the plans attached to the application.

   If a septic system is proposed, specify if an application has been made to the County Health Department for a permit by checking the appropriate box "No" or "Yes." If "yes" is checked, specify if a permit has been issued. If a permit has already been issued, include a copy of the permit with this permit application submittal. The response should be

consistent with the information provided on the septic system permit in Section 6 of the application. Critical due projects that include septic systems require County Health Department approval submitted with the application.

- **Also note: both a permit or letter from the county enforcing agency stating that the project complies with Part 91, Soil Erosion and Sedimentation control and a letter from the applicant stating that any tree/vegetation removal complies with instructions of the local Conservation District must be included with the application.**

5. **Number of individual living-units in proposed building:** Specify the number of individual living-units that will be within the proposed building. For example, a single family house is considered a single living unit and a duplex is considered 2 living units; an apartment over a garage is a separate living unit; guest houses are considered additional living units; and individual apartments are separate living units.

6. **Existing construction is on:** For renovations or additions, specify the type of foundation, pilings, basement, concrete slab, or crawl space, the existing structure is built on by checking the appropriate box. If "other," indicate this and provide a description.

7. **Proposed new construction will be on:** For new structures, specify the type of foundation, pilings, basement, concrete slab, crawl space, or other, the proposed new structure will be constructed on by checking the appropriate box. If "other," provide a description.

8. **Existing construction material above foundation wall:** Specify the type of material, stud frame, log, or block that was used for the existing building above the foundation wall by checking the appropriate box. If "other" is checked, describe the material that was used for the construction.

9. **Proposed new construction material above foundation wall:** Specify the type of material, stud frame, log, or block that will be used for the proposed building above the foundation wall by checking the appropriate box. If "other" is checked, describe the material to be used for the construction.

10. **Existing siding material:** For renovations or additions, specify the type of siding, wood, vinyl, block, or other, that was used for the construction of the existing structure by checking the appropriate box(es). If "other" is checked describe the type of material that was used.

11. **Proposed new siding material:** For new structures, specify the type of siding, wood, vinyl, block, or other, proposed by checking the appropriate box(es). If "other" is checked, describe the type of material proposed to be used.

12. **Area of the existing foundation, excluding attached garage:** Specify the area (length times width) of the existing foundation in square feet. If the existing structure has an attached garage, do not include the surface area of the attached garage in the calculation. The area of the garage is treated separately in another box.

13. **Specify the area of the proposed foundation excluding attached garage:** Specify the area (length times width) of the proposed foundation in square feet. If the proposed structure will have an attached garage, do not include the surface area of the attached garage in the foundation area calculation.

14. **Area of the existing garage foundation:** Provide the surface area in square feet (length times width) of the existing garage foundation in square feet.

15. **Area of proposed garage foundation:** Provide the surface area in square feet (length times width) of the proposed garage foundation in square feet.

16. **If renovating or restoring existing structure, renovation or restoration cost:** Provide the cost to renovate or restore the existing structure if restoration or renovation is proposed for the existing structure. Also provide the current structure replacement value. An insurance agent may be able to provide the replacement value.

17. **Tax assessed value of existing structure:** Provide the tax assessed value (excluding land value) for the existing structure, and provide the year it was assessed. If unknown, the county equalization or assessment office can provide this information.

See Chapter 3 for further discussion of designated CRAs.

SECTION 21: Designated Environmental Areas

21 ACTIVITIES IN DESIGNATED ENVIRONMENTAL AREAS (No Sample Drawings Available)

- Many designated *environmental areas* are completely or partially wetlands. Be sure to complete Section 12 if your proposed activities will also occur in wetlands.
- If you are proposing any alteration in a designated *environmental area*, please attach a detailed site plan.

1 **(Check all that apply)** ☐ placement of *structures* ☐ alteration of vegetation ☐ dredge ☐ fill ☐ grading or other soil alteration ☐ boardwalk or deck ☐ culvert ☐ alteration of natural drainage ☐ driveway or road ☐ other_____

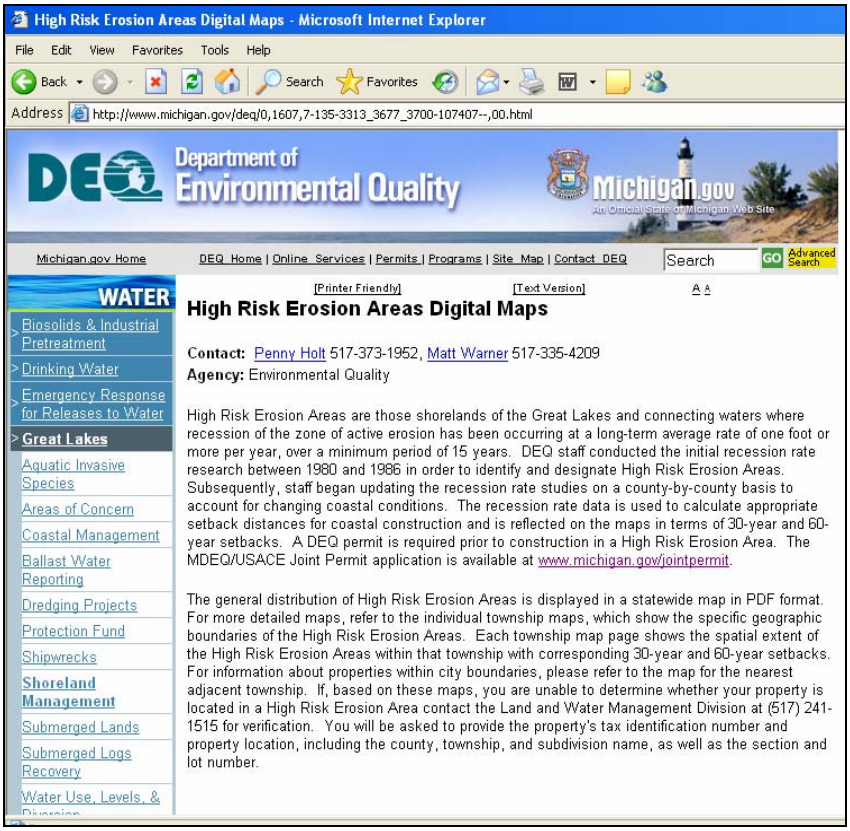
2 Has the MDEQ staff or anyone else conducted a *wetland assessment* for this parcel? ☐ No ☐ Yes **(If Yes,** please provide copy of response)

3 Describe the proposed activity.

_____

_____

Section 21 pertains to activities in designated Environmental Areas. To determine whether or not the project is within a Designated Environmental Area check on MDEQ's web page at **www.michigan.gov/jointpermit,** then click on "Great Lakes (in Related Links)," "Shoreland Management," "High Risk Erosion Area Digital Maps," and then one of the links to the below. If the proposed activity is in one of these areas, complete Section 21 in full, otherwise specify "not applicable" or "unknown."



1. **Check all that apply:** Specify all the types of activities that will be taking place within the Designated Environmental Area by checking the box(es) that best describe the proposed activities.

2. **Has the MDEQ staff or anyone else conducted a wetland assessment for this parcel:** Specify if the MDEQ or anyone else has conducted a wetland assessment for the parcel by checking “No” or “Yes.” If “Yes” is checked, provide a copy of the response and/or report. Many designated environmental areas are completely or partially wetlands.

3. **Describe the proposed activity:** Provide a detailed description of the proposed activities within the environmental area. A detailed site plan with property boundaries and the location and dimensions of the proposed activities is also needed.

See Chapter 3 for further information on designated Environmental Areas.